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The Ohio State University Bulletin

VOLUME XX

FEBRUARY, 1916

NUMBER 20

COLLEGE OF EDUCATION

1916 - 1917

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UNIVERSITY CALENDAR

1916

Entrance examinations, Tuesday to Saturday, June 20 to 24, 8 a. m.

Summer Session, June 19 to August 11.

Entrance examinations, Tuesday to Saturday, September 12 to 16, 8 a. m.

Registration Day—First Semester, Tuesday, September 19.

President's Annual Address, Friday, September 22, 11 a. m.

Latest date for registration of candidates for a degree at the Commencement of June, 1917, October 1.

Registration Day, Short Courses in Agriculture—First Term, Tuesday, October 17.

Mid-semester reports to the Deans concerning delinquent students, Wednesday, November 22.

Thanksgiving recess begins November 29, 1 p. m., and ends December 5, 8 a. m.

Christmas recess begins Thursday, December 21, 6 p. m.

1917

Christmas recess ends Wednesday, January 3, 8 a. m.

Registration Day, Short Courses in Agriculture—Second Term, Wednesday, January 3.

Final examinations, Thursday, January 25 to Thursday, February 1.

First semester ends Thursday, February 1, 6 p. m.

Registration Day, Second Semester—Tuesday, February 6.

Washington's Birthday, Thursday, February 22.

Close of second term, Short Courses in Agriculture, Friday, March 16.

Mid-semester reports to the Deans, Saturday, March 31.

Easter recess, Thursday, April 5, 6 p. m., to Tuesday, April 10, 8 a. m.

Memorial Day, Wednesday, May 30.

Competitive Drill—Cadet Regiment—Saturday, June 2.

Commencement, Tuesday, June 5.

Final examinations, Wednesday, June 6 to Wednesday, June 13.

Entrance examinations, Tuesday, June 19, to Saturday, June 23, 8 a. m.

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COLLEGE OF EDUCATION

TEACHING STAFF

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George W. Knight, Ph.D.....	104 Fifteenth Ave.
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Thomas M. Hills, B. Ph.....	1942 Iuka Ave.
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Ludwig Lewisohn, Litt. D.....	220 W. Tenth Ave.
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George S. Chapin, M.A.....	55 E. Woodruff Ave.
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Carl E. Parry, Ph. D.....	212 W. Tenth Ave.
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Assistant Professor of Botany	
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Assistant Professor of Philosophy	
Rudolf Pintner, Ph. D.....	100 E. Norwich Ave.
Assistant Professor of Psychology	
Fredrica Detmers, Ph. D.....	328 W. Ninth Ave.
Assistant Professor of Botany	

Truman D. Thorpe, 1st Lieut., U. S. A. (retired).....	1137 Wyandotte Road Assistant Commandant of Cadets
Frederic Kreckler, Ph. D.....	316 W. Eighth Ave. Assistant Professor of Zoology and Entomology
Thomas Guthrie Phillips, M. Sc.....	349 W. Tenth Ave. Assistant Professor of Agricultural Chemistry
Ernest W. Burgess, Ph. D.....	1711 Summit St. Assistant Professor of Economics and Sociology
Milton Percival, Ph. D.....	289 Eighteenth Ave. Assistant Professor of English
Albert P. Weiss, M.A.....	2098 Indianola Ave. Assistant Professor of Psychology
Florence A. Meyer, M.A.....	39 Thirteenth Ave. Assistant Professor of Physical Education
John Leroy Clifton, B. Sc. in Education.....	1852 Summit St. Assistant Professor of Principles of Education
Clement M. Beem.....	173 Fourteenth Ave. Instructor in Industrial Arts
Alice R. Robinson, B. Ped.....	12 Fourteenth Ave. Instructor in Art
Mary Louise Shepherd, B. Sc.....	965 Bryden Road Instructor in Art
William J. Norris.....	60 E. Eighth Ave. Instructor in Art
Henry Carl Keidel, Ph. D.....	196 W. Sixth Ave. Instructor in German
Jay Karl Ditchy, M.A.....	2 Fifteenth Ave. Instructor in Romance Languages
Alexander P. Moore, M.A.....	90 E. Fourteenth Ave. Instructor in Romance Languages
Jacob A. Foust.....	21 Frambes Ave. Instructor in Industrial Arts
Clara G. Mark, M.A.....	186 Sixteenth Ave. Instructor in Geology
Horace B. Drury, Ph. D.....	140 E. Blake Ave. Instructor in Economics and Sociology

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Lila Skinner, M.S.....	53 Chittenden Ave.
Instructor in Home Economics	
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Maude G. Adams, B. Sc. in Education.....	20 Thirteenth Ave.
Supervisor of Practice Teaching in Home Economics	
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Instructor in Latin	
James W. Bridges, Ph. D.....	1619 Highland St.
Instructor in Psychology	
Heinrich W. Reese, B.A.....	1606 Neil Ave.
Instructor in German	
Karl M. Dallenbach, Ph. D.....	115 E. Fifteenth Ave.
Instructor in Psychology	
Mabel E. Goudge, Ph. D.....	1995 N. Fourth St.
Instructor in Psychology	

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the city of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called colleges. The Ohio State University comprises eleven colleges and a graduate school, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Education
College of Agriculture	College of Engineering
College of Arts,	College of Homoeopathic
Philosophy and Science	Medicine
College of Commerce and	College of Law
Journalism	College of Medicine
College of Dentistry	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a Director and governing committee for the administration of the regular University courses offered in the summer.

This bulletin is devoted exclusively to the work of the College of Education for the academic year, 1916-17.

[NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing the Secretary of the Entrance Board, Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.]

COLLEGE OF EDUCATION

This college is one of the officially approved instrumentalities of the State for the professional training of teachers. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the college is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this college leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Manual Training, Home Economics, Agricultural Education, Agricultural Chemistry, American History, Anatomy, Bacteriology, Biblical Literature, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Secretary of the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two Summer Sessions are considered the equivalent of one semester and four Summer Sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this college. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

Upon the payment of a fee of one dollar to the State Superintendent of Public Instruction each graduate of this college receives a state provisional high school teachers' certificate valid for four years. The holder of such a provisional certificate, furnishing evidence that he has completed at least twenty-four months of successful teaching, will be granted a life certificate by the State Board of School Examiners.

ADMISSION

The College is open on equal terms to both sexes.

Applicants for admission must be at least sixteen years of age.

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, a student must receive credit by examination or certificate for fifteen entrance units; but an applicant who passes thirteen units may be admitted with two conditions.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded as he will be required to carry courses in the University to make up the deficiency and he may not be able to obtain a degree in the usual four years.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, manual training, home economics, and agriculture.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

GENERAL COURSE

The work of the first two years must include:

(a) English

- | | | |
|-----|--|---------------|
| (a) | English 101 and 104 | (2-2) 4 hours |
| | English 131 and 133 | (3-3) 6 hours |
| | English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency. | |

(b) Languages

- (b) One of the following languages which must be pursued through both the first and second years: (4-4-4-4) 16 hours
- | | |
|---------|--|
| Greek | |
| Latin | |
| French | |
| German | |
| Spanish | |

The second year will not be required of students who offer six entrance units in foreign language.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) **Mathematics**

- (c) Mathematics 121-122: (3-3) 6 hours, or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study.

Every student must secure credit either in high school, or in the college for algebra through quadratics, and for plane geometry.

(d) **Science**

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104

Chemistry 105-106 or 109-110

Geology 101-102

Astronomy 101-102

Biological:

Physiology 101-102

Zoology 101-102

Botany 101-102

The student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry must take one of these subjects in the college.

Students who enter without one unit in zoology or in botany must take a biological science in the college.

(e) History

- (e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one or more units of history for entrance the requirement is twelve semester hours.

(f) Psychology

(3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education not less than 6 hours

Elements of Sociology not less than 6 hours

Educational Psychology not less than 4 hours

The Principles and Practice of Teaching, not less than 6 hours

School Administration not less than 6 hours

A course in the teaching of the major subject, not less than 2 hours.

(2) Major Courses

The work which the student is preparing to teach (elected in the first or second year)—hours enough to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

CURRICULA GENERAL COURSE

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Group (b)	4	Group (b)	4
Group (c) or elective	3	Group (c) or elective	3
Group (d)	4	Group (d)	4
Group (e)	3	Group (e)	3
Physical Training	1	Physical Training	1
Military Drill	1	Military Drill	1

SECOND YEAR

English	(131) 3	English	(133) 3
Psychology	(101) 3	Psychology	(102) 3
Group (b)	4	Group (b)	4
Major Work	5	Major Work	5
Physical Training (women)	1	Physical Training (women)	1
Military Drill	1	Military Drill	1

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
History of Education	(101) 3	History of Education	(102) 3
Educational Psychology	(107) 2	Educational Psychology	(108) 2
Major Work	5	Major Work	5
Correlated Work	2	Correlated Work	2

FOURTH YEAR

Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
School Administration	(101) or (111) 3	School Administration	(102) or (112) 3
Major Work	5	Major Work	5
Elective	4	Elective	4

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, exclusive of the requirement in military drill and physical training, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree.

Students who enter with two units or less than three, of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree.

Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry, must take one of these subjects.

Students who enter without one unit in zoology or in botany, must take another biological science in addition to the requirement of the course.

Students who enter without one unit in history, must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 4	Botany	(102) 4
European History	(101) 3	European History	(102) 3
Military Drill	1	Military Drill	1
Physical Training	1	Physical Training	1

SECOND YEAR

English	(131) 3	English	(133) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Drill	1	Military Drill	1

For Students Majoring in Drawing

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(135) 4
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	3	Elective	2

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

For Students Majoring in Design

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(134) 2
Art	(142) 3	Art	(143) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	3

FOURTH YEAR

First Semester		Second Semester	
History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(135) 4	Art	(144) 3
Art	(117) 3	Art	(145) 3
School Administration	(101) 3	Elective	3

For Students Majoring in History and Appreciation of Art

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(155) 2
Art	(154) 2	Art	(156) 2
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(157) 3	Art	(158) 5
Art	(117) 3	Elective	4
School Administration	(101) 3		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree.

Students who enter with two units and less than three of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree.

Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

A student is required to have either entrance or college credit for both a biological and a non-biological science, in addition to the requirements of the course.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the requirement in chemistry in the course.

Students who enter without one unit in zoology or in botany, must take a biological science, in addition to the requirements of the course.

Students who enter without one unit in history, must take at least six semester hours, of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester			Second Semester		
Chemistry	(105 or 109)	4	Chemistry	(106 or 110)	4
English	(101)	2	English	(104)	2
Zoology	(101)	3	Zoology	(102)	3
French or German		4	French or German		4
Home Economics	(111)	2	Home Economics	(112)	2
Physical Training		1	Art	(119)	1
			Physical Training		1

SECOND YEAR

Chemistry	(127)	4	Agricultural Chemistry	(123)	4
Home Economics	(101)	5	Home Economics	(102)	5
Physiology	(101)	3	Physiology	(102)	3
French or German		4	French or German		4
Physical Training		1	Physical Training		1

THIRD YEAR

Psychology	(101)	3	Psychology	(102)	3
Economics	(135)	3	Economics	(136)	3
Bacteriology	(107)	4	Home Economics	(108)	2
Art	(131)	2	Home Economics	(104)	3
History of Education	(101)	3	Art	(141)	2
			History of Education	(102)	3

FOURTH YEAR

Sociology	(101)	3	Sociology	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Home Economics	(118)	3	School Administration	(102)	3
School Administration	(101)	3	Home Economics	(119)	3
Elective		4	Elective		4

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

MANUAL TRAINING

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects in addition to the requirement of the course.

Students who enter without one unit in zoology or in botany, must take a biological science.

Students who enter without one unit in history, must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

MANUAL TRAINING

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Art	(119) 1	Art	(141) 2
Art	(131) 2	Shopwork	(133) 2
Engineering Drawing	(113) 4	Engineering Drawing	(114) 3
Foreign Language	4	Foreign Language	4
Military Drill	1	Military Drill	1
Physical Training	1	Physical Training	1

SECOND YEAR

English	(131) 3	English	(133) 3
Foreign Language	4	Foreign Language	4
Psychology	(101) 3	Psychology	(102) 3
Shopwork	(129) 3	Shopwork	(130) 3
Shopwork	(105) 2	Shopwork	(115) 2
Military Drill	1	Military Drill	1
Elective	2 or 3	Elective	2 or 3

THIRD YEAR

Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
or		or	
Physics	(103 or 105) 4	Physics	(104 or 106) 4
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Manual Training	(117) 2	Manual Training	(118) 2
Shopwork	(119) 3	Shopwork	(113) 2
Elective	2 to 4	Elective	3 or 4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Manual Training	(111) 3	Manual Training	(112) 3
Principles and Practice	(101) 3	Principles and Practice	(104) 3
School Administration	(101) 3	Elective	6 to 9
Elective	3 to 6		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

AGRICULTURAL EDUCATION

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects, in addition to the requirement of the course.

Students who enter without one unit in zoology or in botany, must take a biological science in addition to the requirement of the course.

Students who enter without one unit in history, must take at least six semester hours of either American or European history.

AGRICULTURAL EDUCATION

FIRST YEAR

First Semester		Second Semester	
School Administration	(123) 3	School Administration	(124) 3
Elements of Agriculture		Elements of Agriculture	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
Rural Economics	(101) 2	Engineering Drawing	(125) 2
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Military Drill	1	Military Drill	1
Physical Training	1	Physical Training	1

SECOND YEAR

Economics	(135) 3	Economics	(136) 3
Psychology	(101) 3	Psychology	(102) 3
Zoology	(101) 3	Zoology	(102) 3
Botany	(101) 4	Botany	(102) 4
Forestry	(101) 2	Horticulture	(156) 2
Military Drill	1	Military Drill	1

THIRD YEAR

History of Education	(101) 3	History of Education	(102) 3
Horticulture	(101) 4	Horticulture	(120) 4
Dairying	(101) 4	Agricultural Engineering	(101) 4
Animal Husbandry	(103) 4	Animal Husbandry	(104) 4

FOURTH YEAR

First Semester

School Administration	(127)	2
Principles of Education	(101)	3
Zoology	(107)	3
Geology	(151)	3
Elective		4

Second Semester

School Administration	(122)	2
Principles of Education	(104)	3
Zoology	(108)	3
Farm Crops	(101)	4
Elective		3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credits for one hundred and forty hours, exclusive of the requirement in military drill and physical training, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN AND LYMAN, ASSISTANT PROFESSOR T. G. PHILLIPS, MR. SALTER, MR. HUTCHINSON, MR. McCLURE
AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. Household Chemistry. Four credit hours. Second semester. Home Economics. Prerequisite, Chemistry 106 or 110. Mr. Lyman, Mr. Phillips.

Lectures on household chemistry. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods and other materials of household interest.

SOILS

152. Elementary Soils. Five credit hours. Second semester. Two lectures, one quiz and two laboratory periods each week. Four-year courses in Agriculture and Horticulture. Prerequisite, Agricultural Chemistry 103.

An introductory course on the origin and the chemical and physical properties of soils, their management and fertilization.

AGRICULTURAL EDUCATION

(See School Administration)

AGRICULTURAL ENGINEERING

Office, 201 Horticultural Hall

PROFESSOR RAMSOWER, ASSISTANT PROFESSOR IVES, MR. McCUEN

101. Farm Engineering. Four credit hours. Either semester. Prerequisite, Engineering Drawing 125. Mr. Ramsower.

Lectures and recitations on the laying out and equipment of the farm, and a detailed study of farm power, water supply, and farm machinery. Practice in the comparison and testing of farm machines, handling concrete, rope splicing and in the working out of problems in farm mechanics.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT AND HOCKETT, ASSISTANT PROFESSOR
A. M. SCHLESINGER, MR. WOOD

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), courses 101-102 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher: 101-102, 103-104, 119-120, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 133-134 and Economics 135-136 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1912). Three credit hours. The year. Mr. Hockett, Mr. Schlesinger, Mr. Wood.

American History 101 is given also during the second semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases receive chief attention. The first semester covers the period 1763-1829. The second semester covers the period 1829-1912. Text-book, discussion, and collateral readings. This course must precede all other courses in American History.

107. Formation of the Constitution. Two credit hours. First semester. Prerequisite, American History 101-102. Political Science 101 will be found a valuable adjunct to this course. Mr. Hockett.

Beginning with a brief study of the constitutional ideas of Americans in the revolutionary period, the course traces the formation of the federal constitution by the convention of 1787, and discusses the constitutional problems involved in the establishment of the government. Lectures, discussion, and reports.

108. Constitutional History of the United States. Two credit hours. Second semester. Prerequisite, American History 101-102. American History 107 affords a good foundation, and Political Science 101 a valuable adjunct. Mr. Hockett.

The chief controversies over the interpretation of the constitution and the effects of these controversies upon the evolution of the American constitutional system. Such questions are dealt with as the acquisition of territory, internal improvements, the tariff, slavery, and the relations of the nation and the states. Lectures, discussion, and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102. Mr. Schlesinger.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion, and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1912). Two credit hours. Second semester. Prerequisite, American History 101-102. American History 109 affords a good foundation. Mr. Schlesinger.

The development of national parties in the period from 1852 to the election of Woodrow Wilson, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion, and reports.

***103-104. The American Colonies, 1600-1783.** Three credit hours. The year. Prerequisite, American History 101-102.

The general history of the English colonies in America, with especial emphasis on European conditions affecting colonization, the development of government in the several colonies, and relations with the mother country, including the struggle for independence. Lectures, discussion and reports.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American History.

119-120. Introduction to Historical Research. Two credit hours. The year. Prerequisite, four semesters in American History. Mr. Hockett.

*Not given in 1916-1917.

Practice in simple historical methods, such as the use of catalogs and finding lists, the collecting and criticising of material, and its organization in historical composition. Each student is required to prepare topics involving the use of source material. Designed especially for students who expect to teach American History in secondary schools, or to pursue graduate work in this field.

111. The Slavery Struggle in the United States. Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

112. Reconstruction and its Results, 1863-1915. Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Schlesinger.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

***113. Early American Diplomacy, 1776-1850.** Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, and the origin of the Monroe Doctrine. Lectures, discussion and reports.

***114. Problems of American Diplomacy Since 1850.** Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History

*Not given in 1916-1917.

101-102, and at least two other semesters in the Social Science group. Mr. Knight.

The later problems in the diplomacy of the United States, growing out of the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian canal, and neutral rights during the Great War in Europe. Lectures, discussion and reports.

121. The Teaching of American History. Two credit hours. First semester. Given biennially. Mr. Knight.

Lectures, reading, and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment, examination of text-books; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

For graduate courses in this department see the *Bulletin of the Graduate School*.

ANATOMY

Office, 105 Biological Hall

PROFESSOR LANDACRE

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to eight laboratory hours each week. Prerequisite, Zoology 101-102 or Physiology 101-102 or an equivalent. Mr. Landacre, Mr. Hoskins.

Fishes, amphibians and reptiles. Formerly Zoology 103.

102. Comparative Anatomy of the Vertebrates. Three to five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101, Physiology 101, or Zoology 101, or an equivalent. Required of

students in the Arts-Medicine and Science-Medicine courses. Mr. Landacre.

Birds and mammals. Formerly Zoology 104.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisites, Zoology 101-102 or Physiology 101-102 or an equivalent. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study. Formerly Zoology 119.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisites, Zoology 101-102 or Physiology 101-102 or an equivalent. Mr. Landacre.

The histology and early development of the frog.

Formerly Zoology 120.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisite, one year of biological science. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisites, one year of biological science. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Comparative Neurology. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates. Formerly Zoology 133.

110. Comparative Neurology. Three to five credit hours. Second semester. One lecture or conference and five to eight

laboratory hours each week. Prerequisite, Anatomy 101-102. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

Formerly Zoology 134.

For graduate courses in this department see the Bulletin of the Graduate School.

ANIMAL HUSBANDRY

Judging Pavilion

PROFESSORS PLUMB AND KAYS

103. Breeds of Horses and Sheep. Four credit hours. First semester. Mr. Kays.

Lectures, text-books, and recitations upon the history, development, characteristics, and adaptation of types and breeds of horses and sheep. Laboratory work includes judging types and breeds of horses and sheep, one afternoon a week and occasional inspection trips to herds in the State.

104. Breeds of Cattle and Swine. Four credit hours. Second semester. Mr. Kays.

Covers the subject of cattle and swine on the same basis as Animal Husbandry 103.

ART

Office, 203 Hayes Hall

PROFESSOR KELLEY, MISS ROBINSON, MISS SHEPHERD, MR. NORRIS, MR. CHRISTENSEN

131-132. Elementary Drawing. Two credit hours. The year. This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also in the second semester.

Art 132 is given also in the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133.

135. Illustrative Drawing. Four credit hours. Either semester. Prerequisite, Art 134.

Different methods of drawing for illustration.

136. Water Color Painting. Two credit hours. Either semester. Prerequisite, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. Advanced Water Color. Three credit hours. Second semester. Prerequisite, Art 136.

138. Oil Painting. Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. Advanced Oil Painting. Three credit hours. Second semester. Prerequisite, Art 138.

Painting from the costume model.

141. Elementary Design. Two credit hours. Either semester. Prerequisite, Art 131 and 119.

The principles of the theory and practice of design.

142. Advanced Design. Three credit hours. Either semester. Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. Specialized Design. Three credit hours. Second semester. Prerequisite, Art 142.

Field to be chosen by the student.

144. Commercial Design. Three credit hours. Second semester. Prerequisite, Art 142.

This course is aimed to give a grasp of commercial design problems.

145. Thesis Work Design. Three credit hours. Second semester. Prerequisite, Art 143.

This course is required of students graduating in design.

151. History of Classic Art. Three credit hours. Either semester.

The study of classic art with some consideration of the art of Egypt, Assyria, and Persia. Reading and reports.

152. History of Medieval Art. Three credit hours. Second semester. Prerequisite, Art 151.

Reading and reports.

153. History of Renaissance and Modern Art. Three credit hours. First semester. Prerequisite, Art 151.

From the beginning of the Renaissance in Italy to the present time. Reading and reports.

154. Greek Sculpture. Two credit hours. First semester. Prerequisite, Art 151.

Reading and short thesis.

155. The Italian Schools of Painting. Two credit hours. Second semester. Prerequisite, Art 151, 152, 153.

Reading and short thesis.

156. The Netherlandish Schools of Painting. Two credit hours. Second semester. Prerequisites, Art 151, 152, 153.

Reading and short thesis.

157. Art of China and Japan. Three credit hours. First semester. Prerequisite, junior standing.

Reading and reports.

158. Thesis in Art History. Five credit hours. Second semester. Prerequisite, fifteen hours of art history.

This course is required of students graduating in art history.

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments and observations.

119. Appreciation of Art. One credit hour. Either semester.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141.

Art in dress; the direct application of design principles and color harmony to dress.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. General Astronomy. Three credit hours. The year. Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. Astronomy, Geodesy and Least Squares. Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. Advanced Astronomy. Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSOR MORREY, ASSISTANT PROFESSOR STARIN, MR.
FRONING, MISS MCCOY, AND LABORATORY ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in bacteriology are open to advanced undergraduates and graduate students only, not to freshmen or sophomores. The instructor in charge must be consulted before electing.

107. General Bacteriology. Four or five credit hours. First semester. Mr. Morrey, Mr. Froning, Miss McCoy, and laboratory assistants.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods, and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mr. Froning, Miss McCoy.

A study of the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Miss McCoy.

A study of the methods and devices used in these processes

and of the organisms concerned. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

116. Bacteriological Chemistry. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108, or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

119-120. Pathogenic Protozoa. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108, or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmoses, and spirochaetoses.

125-126. Special Problems in Bacteriology. Three to five credit hours. The year. Conferences, library, and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

For graduate courses in this department see the Bulletin of the Graduate School.

BIBLICAL LITERATURE, HISTORY AND EXEGESIS

Office, 103 Orton Hall

PROFESSOR BREYFOGLE

***101. Biblical Literature.** Three credit hours. First semester. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the literature, history and religion of the Old Testament. A general course touching upon the historical crises of the Old Testament with an attempt to recreate

*Not given in 1916-1917.

the political, economic and social conditions as a basis for the better understanding of the moral and religious teachings. A stereopticon will be used, showing the latest discoveries in Palestine, Egypt, and Assyria which bear upon the period.

***102. Historical Christianity in Outline.** Three credit hours. Second semester. Miss Breyfogle.

A consideration of Judaism, of the life, work, and teachings of the Founder of Christianity, and of Apostolic teaching.

Intended to give the student a systematic knowledge of the New Testament in its historical setting. The relation of Christianity to Hellenistic Judaism, the teachings of Jesus as shown by a comparison of the gospels, and the expansion of Christianity throughout the world during the Apostolic times. Stereopticon views will be freely used and an endeavor made to familiarize the student with the text.

103-104. The History of Religion in Outline. Three credit hours. The year. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the great book religions of the world.

BIBLIOGRAPHY

Office, Library

MISS JONES, MR. REEDER

101-102. The Library and the School. One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS SCHAFFNER AND TRANSEAU, ASSISTANT PROFESSORS
GRIGGS, DETMERS, AND STOVER, MR. SEARS, AND
DEPARTMENT ASSISTANTS

101-102. General Botany. Four credit hours. The year. Mr. Schaffner, Mr. Griggs, Miss Detmers, Mr. Stover.

*Not given in 1916-1917.

Text-books: Curtis' *Nature and Development of Plants* (4th Edition), Schaffner's *Laboratory Outlines for General Botany* (4th Edition).

A general survey of the plant kingdom by the comparative method of morphological types and life cycles. A general view of the morphology, evolution, and classification of plants from the lowest to the highest.

110. General Dendrology. Two credit hours. First semester. Text-book: Schaffner's *Field Manual of Trees*. Mr. Sears.

A study of trees and shrubs, with practice in the identification of woody plants, in both summer and winter condition. Students are required to prepare a dendrological herbarium.

120. Field Botany. Three credit hours. Second semester. Prerequisite, Botany 101. Mr. Griggs.

Excursions are made to most of the interesting localities within reach of Columbus on Saturday. On Monday afternoon material collected in the field is determined.

123-124. Advanced Morphology. Three to five credit hours. The year. Prerequisite, Botany 101-102, or equivalent. Mr. Griggs.

Intended to complete the morphological training begun in the first year. Instruction in microtechnique. Whenever possible this course should be accompanied by Botany 135-136.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102, or equivalent. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors.

***143-144. Plant Distribution.** Three credit hours. The year. Prerequisite, Botany 101-102. Given biennially, alternating with Botany 123-124. Mr. Griggs.

The principal vegetational areas of the earth with the characteristic plants of each, giving especial attention to the biographic areas of North America.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisite, Botany 101-102, and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory, and field work, with practice teaching under supervision.

*Not given in 1916-1917.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

127-128. General Plant Pathology. Four credit hours. The year. Laboratory and field work. Prerequisite, Botany 101-102, or equivalent. Text-book: Stevens' Fungi and Stevens and Hall's Diseases of Economic Plants. Mr. Griggs.

129-130. Systematic Botany. Three to five credit hours. The year. Prerequisite, Botany 101-102, or equivalent. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phyletic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

131-132. Cytology and Microtechnique. Three to five credit hours. The year. Prerequisite, Botany 123-124, or equivalent. Mr. Schaffner.

133-134. Minor Investigations. Three to five credit hours. The year. Prerequisite, Botany 101-102, or equivalent. Mr. Schaffner, Mr. Transeau, Mr. Griggs, Mr. Stover.

135-136. Evolution of Plants. One credit hour. The year. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Schaffner.

The progress of evolution in the plant kingdom with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

137-138. Seminar in Botany. One credit hour. The year. Prerequisite, two years' work in botany.

This course should be elected only in connection with other advanced courses.

For graduate courses in this department see the Bulletin of the Graduate School.

CHEMISTRY

Office, 100 Chemistry Hall

PROFESSORS McPHERSON, HENDERSON, FOULK, WILLIAM L. EVANS,
AND WITHROW, ASSISTANT PROFESSORS BOORD AND
SHIPLEY, MR. HUMMELL, AND DEPARTMENT
ASSISTANTS

105. Elementary Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Hummell, Mr. McNeil, Mr. Young.

A general course on the chemistry of the non-metals, arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Chemistry 106, second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 105. Mr. Evans, Mr. Hummell, Mr. McNeil, Mr. Young.

A general course on the chemistry of the metals. The laboratory work accompanying is a general introductory course in qualitative analysis.

109. General Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Hummell, Mr. Schmidt, Mr. McCrosky, Mr. Balz.

A general course on the chemistry of the non-metals. It is more advanced than Chemistry 105 and is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Chemistry 110, second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 109. Mr. Evans, Mr. Hummell, Mr. Schmidt, Mr. McCrosky, Mr. Balz.

A general course on the chemistry of non-metals. It is more advanced than Chemistry 106. The laboratory work is a general course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. Prerequisite, Chemistry 106 or 110. Mr. Henderson.

A course of fundamental topics in the field of advanced general chemistry.

117. Qualitative Analysis. Three credit hours. First semester. One lecture and six laboratory hours each week. Prerequisite, an acceptable course in general chemistry. Mr. Shipley.

An elementary course in qualitative analysis. Similar to Chemistry 106 and 110 and is arranged for students with advanced standing who have had no qualitative analysis.

119-120. Quantitative Analysis. Four credit hours. The year. One lecture, nine laboratory hours each week. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 106 or 110, or equivalent. Mr. Foulk, Mr. Shipley, Mr. Hollingsworth.

Elementary principles of gravimetric and volumetric analysis, with typical analytical methods. This course must be accompanied by Chemistry 124, except by special permission of the instructor. It is also desirable that it be accompanied by Chemistry 113-114.

124. Chemical Problems. One credit hour. Second semester. Mr. Foulk.

Extended practice in the solution of problems pertaining to gravimetric and volumetric analysis. This course is arranged to accompany Chemistry 119-120.

127. Organic Chemistry. Four credit hours. First semester. Three lectures, one quiz. Prerequisite, an acceptable course in general chemistry. Mr. McPherson.

This is a general introductory course in organic chemistry.

131-132. The Teaching of Chemistry. Two credit hours. The year. Two lectures or conferences. Prerequisite, permission of the instructor. Given 1914-1915, and biennially thereafter. Mr. McPherson.

A general discussion of topics bearing on the teaching of chemistry in secondary schools.

151-152. Organic Chemistry. Two credit hours. The year. Prerequisite, Chemistry 109-110, 113-114 and 119-120, except by special permission of the instructor. Mr. McPherson.

Lectures in organic chemistry.

153-154. Organic Chemistry. Two or three credit hours. The year. Six or nine laboratory hours each week. Laboratory open afternoons. This course must be accompanied or preceded by Chemistry 151-152. Mr. McPherson, Mr. Boord.

The preparation of typical organic compounds.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

187. Inorganic Preparations. Two or three credit hours.

Either semester. Six to nine laboratory hours each week. Laboratory open afternoons. Prerequisite, Chemistry 114 and 120. Mr. Henderson, Mr. Stegeman.

The preparation of a limited number of compounds chosen so as to give practice in the different kinds of manipulation involved in the preparation of inorganic compounds.

For graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

PROFESSOR BOLLING, ASSISTANT PROFESSOR BARROWS
FOR ADVANCED UNDERGRADUATES AND GRADUATES

197. English Sounds for Foreigners. Two credit hours. First semester. No prerequisite. Miss Barrows.

195. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

DAIRYING

Office, 111 Townshend Hall

PROFESSOR ERF, ASSISTANT PROFESSORS CUNNINGHAM,
CLEVINGER, AND STOLTZ

101. Principles of Dairying. Four credit hours. Either semester. Prerequisite to all other courses in dairying. Mr. Erf, Mr. Cunningham, Mr. Stoltz.

Lectures will be given on the relation of dairying to general agriculture; the composition of dairy products and the laws governing them; the secretion of milk and the testing of milk for butter fat; the formation of profitable herds; testing individual cows and herds for butter fat; entering and testing cows for Advanced Registries. In the laboratory, practical work will be given in the testing of milk and dairy products, and testing dairy herds for butter-fat production.

ECONOMICS AND SOCIOLOGY

Office, 102 Page Hall

PROFESSORS HAGERTY, HAMMOND, LOCKHART, HUNTINGTON, AND
RUGGLES, ASSISTANT PROFESSORS WALRADT, PARRY, AND
BURGESS, MR. DRURY, MR. BRUDER, MR. HARRIS,
MR. WEIDLER, MR. WILKINSON, MISS LOUISE
MARK, MR. McKENZIE, MR. ECKELBERRY

ECONOMICS

131. Economic and Social History of England and the United States. Three credit hours. First semester. Open only to first and second year students. Mr. Walradt, Mr. Drury.

133. Economic Geography. Three credit hours. Second semester. Open only to first and second year students. Mr. Weidler, Mr. Wilkinson.

The influences of geographic environment, with special reference to North America.

135-136. Principles of Economics. Three credit hours. The year. Not open to first year students. Should precede all courses in Economics except 131, 133, concurrent 139. Mr. Hammond, Mr. Lockhart, Mr. Ruggles, Mr. Parry, Mr. Drury, Mr. Weidler, Mr. Wilkinson.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Text-book, lectures, and individual investigation.

Economics 136 is given also during the first semester.

Economics 135 is given also during the second semester.

139. Elements of Accounting. Three credit hours. First semester. Prerequisite, registration in Economics 135-136. Mr. Harris and assistant.

An introduction to practical accounting, including the analysis and interpretation of business statements.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 135-136. Mr. Walradt.

The fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 135-136. Mr. Lockhart.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141. Mr. Lockhart.

A critical examination of tax systems with particular reference to questions of incidents and of proposed reforms. The Ohio system of taxation will be given special consideration.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 135-136. Mr. Huntington.

The basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

160. International Commercial Policies. Three credit hours. First semester. Prerequisite, Economics 135-136. Mr. Parry.

Theory of international trade. Historic policies, mercantilism, free-trade and protection; a study of the tariff policy of the United States, with a comparative study of the policies of the British Empire, France and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 135-136. Mr. Hammond.

The labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. Organization and Remuneration of Labor. Three credit hours. Second semester. Prerequisite, Economics 135-136. Mr. Hammond.

History of the labor movement. Trade union policies and methods. Employers' organizations. Collective bargaining. Industrial arbitration. Attempts to modify the wage system. Time, piece, and progressive wages. Profit sharing, labor co-partnership, and co-operation.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

SOCIOLOGY

101-102. Principles of Sociology. Three credit hours. The year. Mr. Hagerty, Mr. Burgess, Mr. Bruder, Miss Mark, Mr. McKenzie.

Not open to first year students.

The fundamental principles of sociology. Text-book, lectures, collateral reading and individual investigation.

Sociology 101 is given also during the second semester.

Sociology 102 is given also during the first semester.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102. Mr. McKenzie.

Matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman and Medieval Periods. The modern family, its functions and its problems.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effects upon the home. Organization of the household with reference to the functions of man and woman.

123. Anthropology. Three credit hours. First semester. Mr. Bruder.

An elementary study of the essential characteristics of mankind and of the distinguishing traits of the several races of men; the origin and development of various races. Anthropological problems. Text-book, lectures, discussion, and readings.

124. Ethnology. Three credit hours. Second semester. Prerequisite, Sociology 123. Mr. Bruder.

A genetic study of the social, occupational, and mental life of the several races of men. The origin and development of the various institutions and activities which have had their beginning in primitive society. Ethnological problems. Text-book, lectures, discussion, and readings.

127. History and Theory of Leisure. Three credit hours. First semester. Prerequisite, registration in Sociology 101. Mr. Burgess.

The source of leisure. Leisure and slavery. Historical development of leisure classes. Their characteristics. The

play of primitive times, of Greece and Rome, of the Middle Ages. Leisure and progress. The importance of play in the upbuilding of society.

128. Play and Recreation. Three credit hours. Second semester. Prerequisite, Sociology 127.

The recreation and playground movement of Europe and America. Settlements and school houses as social centers. Voluntary and public systems of organization and administration. The social bases of wise recreational efforts. The direction of leisure time as a factor in the solution of specific social problems. The necessity of sociological training for the recreation director.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104. The Immigrant. Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Bruder.

The causes and sources of migration, provisions for transportation, immigration laws, and the assimilation of nationalities.

105. The Negro. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Bruder.

Tropical man and the results of his transference to a temperate climate. Negro health, crime, education, and progress in the United States.

***110. Criminology.** Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

Crime and the social and physiological causes of crime. An historical study of prison systems and methods; the indeterminate sentence, the probation, and the parole laws. The juvenile court and its agencies to prevent crime.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1916-1917.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSOR FRENCH, ASSISTANT PROFESSORS MEIKLEJOHN,
WILLIAMS, SHEETS, AND TURNBULL, MR. GILBERT,
MR. SVENSEN, MR. INAGAKY

101. Elementary Mechanical Drawing. Two credit hours.
Either semester.

Practice in the use of drawing instruments, elementary
projections.

102. Mechanical Drawing. Three credit hours. Either
semester. Prerequisites, Drawing 101 or 123.

103. Descriptive Geometry. Three credit hours. First
semester. Prerequisite, Drawing 102.

Two recitations and one two-hour drawing period each
week.

104. Machine Sketching. Three credit hours. Second
semester. Prerequisite, Drawing 103.

One lecture and two two-hour drawing periods each week.

113. Free-hand Drawing and Lettering. Four credit
hours. First semester.

114. Mechanical Drawing. Three credit hours. Second
semester. Prerequisite, Drawing 113.

125. Mechanical Drawing. Two credit hours. Either
semester.

131-132. The Teaching of Mechanical Drawing. Three
credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT AND GRAVES, ASSIST-
ANT PROFESSORS COOPER, BECK, KETCHAM, ANDREWS AND
PERCIVAL, MR. CRAIG, MR. DISHONG, MR. WILEY,
AND DEPARTMENT ASSISTANTS

101. Paragraph Writing: Description and Narration. Two
credit hours. Either semester. All instructors.

Text: Scott and Denney's Paragraph Writing, and Dun-
can, Beck and Graves' Specimens of Prose Composition.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session. -

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisite, English 101-104, 105. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisite, English 101-104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

108. Advanced Composition. Two credit hours. Second semester. Prerequisite, English 101-104, 107. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

111-112. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, English 104. Mr. Ketcham.

121. Public Speaking. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Ketcham.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

122. Debating. Two credit hours. Second semester. Prerequisite, English 101-104. Mr. Ketcham.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

124. Extempore Speaking. Two credit hours. Second semester. Prerequisite, English 122. Mr. Ketcham.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisite, English 121-122. Mr. Ketcham.

The methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominating speeches; after dinner speaking; discussions of current events; political, business and social addresses.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Text-book: Greenough and Kittredge's Words and their Ways in English Speech.

131. Introduction to English Literature. Three credit hours. Either semester. No prerequisite course. Mr. Cooper, Mr. Beck, Mr. Andrews, Mr. Percival.

Second semester. Mr. Taylor, Mr. Graves.

The outline of the history will be given by lecture. The following will be read: a ballad book, three plays of Shakespeare, Selections from Palgrave's Golden Treasury, Addison's Essays, Carlyle's Hero as Poet, one of Scott's novels.

European History 103-104 (Narrative History) is recommended in connection with this course.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves, Mr. Andrews.

Second semester. Mr. Cooper, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant, and Poe; of Hawthorne, Emerson, Whittier, Longfellow, and Lowell; and of Walt Whitman; with a brief survey of recent literature.

137. Dr. Johnson and his Circle. Three credit hours. First semester. Prerequisite, English 131. Mr. Percival.

A study, through Boswell, of the life, character and opinions of Dr. Johnson and of his relation to the political, social and literary tendencies of his time. Reading in Boswell, Goldsmith,

Sheridan, Garrick, Reynolds, Ossian, Mme. D'Arblay's Diary, Chesterfield's Letters, Walpole's Letters.

136. Eighteenth Century Poetry. Three credit hours. Second semester. Prerequisite, English 131. Mr. Percival.

After some consideration of the classical poetry of Pope and his contemporaries, the development of romantic poetry is studied in the works of Thomson, Gray, Collins, Burns, Goldsmith, Cowper, Crabbe, and others.

145. Nineteenth Century Essayists. Two credit hours. First semester. Prerequisite, English 131. Mr. Denney.

Reading in Coleridge, Lamb, Landor, DeQuincey, Hazlitt, and Carlyle.

146. Nineteenth Century Essayists. Two credit hours. Second semester. Prerequisite, English 131. Mr. Denney.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

141. Nineteenth Century Poetry. Three credit hours. First semester. Prerequisite, English 131. Mr. Taylor.

Wordsworth, Shelley, Keats and their contemporaries.

142. Nineteenth Century Poetry. Three credit hours. Second semester. Prerequisite, English 131. Mr. Taylor.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinbourne, Rossetti, Morris and Meredith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157. Versification. Three credit hours. First semester. This course is limited to thirty members. Special permission necessary. The course should be preceded by English 135 and 136, or 139 and 140, or 141 and 142. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

159. Milton and his Contemporaries. Three credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Andrews.

The belles-lettres of the Puritan Revolution.

167. Shakespeare: Histories and Tragedies. Three credit hours. First semester. Prerequisite, fourteen semester hours in English. Mr. Denney.

168. Shakespeare: Comedies and Romances. Three credit

hours. Second semester. Prerequisite, fourteen semester hours in English. Mr. Denney.

181. The Teaching of English. Two credit hours. First semester. Prerequisite, ten semester hours in English. Mr. Denney.

For graduate courses in this department see the Bulletin of the Graduate School.

EUROPEAN HISTORY

Office, 204 University Hall

PROFESSORS SIEBERT, McNEAL AND PERKINS, MR. HARRIS

101. Medieval History. Three credit hours. First semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

102. Modern History from 1500 A. D. Three credit hours. Second semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third, or fourth-year students. Mr. Perkins, Mr. Harris.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

105. History of Greece. Three credit hours. First semester. No prerequisite for second, third, or fourth year students. Mr. McNeal.

106. History of Rome. Three credit hours. Second semester. No prerequisite for second, third, or fourth year students. Mr. McNeal.

***119-120. History of Germany.** Two credit hours. The year. For second, third, and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

121-122. History of France. Two credit hours. The year. No prerequisite. Open to second, third, and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

*Not given in 1916-1917.

127-128. Medieval and Modern European History. Three credit hours. The year. Not open to students who have had European History 101, 102. Not open to first and second year students.

Primarily for teachers but is not a course in the teaching of European History.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107-108. Medieval Civilization. Two credit hours. The year. Prerequisite, European History 101, 102. Mr. McNeal.

Advanced students from other departments admitted without this prerequisite on consent of instructor.

First semester, the culture produced by feudal society; second semester, the culture produced by the church.

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisite, European History 101, 102. Mr. Siebert.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisite, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

123-124. Europe from 1815 to 1915. Three credit hours. The year. Prerequisite, European History 101, 102. Mr. Perkins.

The history of central and western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. History of the Church in Western Europe. Three credit hours. The year. Prerequisite, European History 101, 102. Advanced students from other departments admitted without the prerequisite.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert, Mr. Perkins.

This course will most naturally be taken as a continuation of American History (Teachers' Course), the two semesters

forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History 101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

For graduate courses in this department see the Bulletin of the Graduate School.

FARM CROPS

Office, 108 Townshend Hall

MR. STEMPLE AND ASSISTANTS

101. Field Crop Production. Four credit hours. Either semester. Prerequisite, Botany 101, or its equivalent. Mr. Stemple.

A study of the history, adaptation, distribution, and classification of the cereal crops, and the cultivation, harvesting, and marketing of the same throughout the great agricultural sections of the world, with especial attention given to Ohio conditions.

FORESTRY

Office, 101 Horticulture and Forestry Building

PROFESSOR LAZENBY, ASSISTANT PROFESSOR SCHERER,
MR. PFLUEGER

101. Introduction to Forestry. Two credit hours. First semester. Lectures and field work. Mr. Lazenby.

A general presentation of what trees are, how they live and grow, and what they do. A specific study of the trees and shrubs on the campus, in the city parks, the University woodlots and near-by woodlands.

FRENCH

(See Romance Languages)

GEOLOGY

Office, 104 Orton Hall

PROFESSORS PROSSER AND BOWNOCKER, ASSISTANT PROFESSOR HILLS, MR. VERWIEBE, MISS CLARA MARK, MR. COTTINGHAM

101-102. Physiography. Three credit hours. The year. Open to freshmen and sophomores only. Mr. Bownocker, Mr. Hills, Miss Mark, Mr. Cottingham.

Three field trips are made Saturdays in each semester, each trip taking the place of a recitation. During January, February, and March, the Monday recitation is replaced by laboratory work.

Physiographic features of the earth's surface; the ocean, and the atmosphere. Recitations, lectures, and assigned readings, illustrated with models and lantern views.

103. Inorganic Geology. Three credit hours. First semester. Mr. Bownocker.

Introductory course. Petrographical, structural, and dynamical geology. Study of common minerals and rocks and geological maps. The course is illustrated with lantern views, models, and museum materials.

104. Historical Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103. Mr. Prosser.

A general course in paleontological and stratigraphical geology, illustrated by lantern views, maps, and specimens. The development of organisms and the classification and distribution of geological formations, especially those of Ohio, are considered. After the first of April, some of the Friday lectures will be replaced by field trips on Saturdays.

Geology 101 or 103, and 104 are considered prerequisites for advanced work in physiography, historical or inorganic geology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Field Geology. Three to five credit hours. First semester. Prerequisite, Geology 101 or 103-104. Mr. Prosser.

Lectures, assigned readings, field trips, and laboratory work. Field trips generally on Saturdays while the weather permits, laboratory work for the remainder of the semester.

A study of the geological formations readily accessible from Columbus, and identification of fossils characteristic of different formations. This course is intended to acquaint the student with the ordinary methods of field investigation, and involves the collection and identification of specimens, the measurement of geological sections, and the preparation of a report describing the region studied. Occasionally, longer geological excursions will be arranged.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103 and 104. Mr. Hills.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned readings and map work. The second half, largely to field work and the preparation of reports, the field work being on Saturdays.

111. Physiography of Central Ohio. Three credit hours. First semester. Prerequisite, Geology 101-102, and 103-104, or 103-104 concurrent. Mr. Hills.

Three field trips each week while the weather permits; assigned reading and written reports during the winter.

Field and laboratory course.

116. Physiographic Geology. Three credit hours. Second semester. Prerequisite, Geology 101-102 and 103-104. Mr. Hills.

Intensive study of physiographic principles, processes, and agents, with an application to certain type regions of the United States. Occasional field trips.

175-176. The Teaching of Physiography. Two credit hours. The year. Prerequisite, Geology 101-102, 104, 106, and 111, or an equivalent. Mr. Hills.

Lectures, readings, conferences, and reports. Sources and selection of materials; use of maps, globes, and other representative materials; the excursion; preparation of type studies; correlation of topics; and discussion of the general course, with other topics of practical importance to the teacher of Physical Geography.

For graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317-318 University Hall

PROFESSORS EVANS AND EISENLOHR, ASSISTANT PROFESSORS
THOMAS, BARROWS, LEWISOHN AND BUSEY, MR. KEIDEL,
MR. KOTZ, MR. REESE, AND DEPARTMENT
ASSISTANTS

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic and practice courses. The linguistic and practice courses are intended primarily for students who desire to make direct professional use of the language. A student beginning German at the university is advised not to take the subject as a major study. For students who enter with two years of German and who desire to

major in German the following outlined course is recommended:

First year: 103-104.

Second year: 115-116 and 131-132 or 133-134.

Third year: 117-118 or 119-120, 175, and one literary course in the group Advanced Undergraduates and Graduates.

Fourth year: at least one literary course in the group Advanced Undergraduates and Graduates, 171-172, 173, 177-178.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 102 is given also during the first semester.

German 101 is given also during the second semester.

103. Intermediate German. Four credit hours. First semester. Prerequisite, German 101-102, or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose and a classical drama supplemented by discussions of syntax; prose composition.

German 103 is given also during the second semester.

104. Easy Classical Reading and Composition. Four credit hours. Second semester. Prerequisite, German 103, or three entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

German 104 is given also during the first semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103, or three entrance units.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year. Modern and classical prose and verse. Oral and written practice. Open only to freshmen with four entrance units in German. Mr. Busey.

115-116. Classical and Modern Writers. Three credit hours. The year. Selections from the 18th and 19th century writers; written and oral exercises. To be conducted in German. Miss Barrows, Mr. Kotz.

117-118. Schiller: Introduction to Life and Works. Two credit hours. First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Krieg. Miss Thomas.

119-120. Nineteenth Century Drama. Two credit hours. The year. Selected dramas read and interpreted in class. The interpretation will take the form of simple lectures in German to be reproduced orally and in writing by the student. First semester: Selections from Kleist, Grillparzer, Hebbel, Ludwig. Second semester: Selections from Wildenbruch, Sudermann, Hauptmann, Fulda. Mr. Lewisohn, Mr. Keidel.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Eisenlohr, Mr. Busey, Mr. Kotz.

133-134. Conversation. Two credit hours. The year. The class will meet four times a week. Little outside preparation required. Mr. Keidel, Mr. Reese.

German 115 to 134, not open to freshmen, require as prerequisite German 104 or its equivalent. German 115-116, offering a considerable amount of intensive oral and written work, is especially recommended for students desiring to take German as a major subject. German 117 to 124 are primarily reading courses. No student may elect more than two year-courses in the group 107 to 124. A combination of German 131-132 or 133-134 with one of the Courses 115 to 124 is advised.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: At least one year course in the group 107 to 124 or the equivalent.

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

***151-152. Goethe: Introduction to Life and Works.** Three credit hours. The year. Mr. Evans.

First semester: Selections from lyrics, early dramas, and prose. Second semester: Faust.

153-154. Survey of German Literature. Three credit hours. The year. Mr. Evans.

Lectures, interpretation of selected texts, and parallel readings. First semester: From the beginning to Lessing. Second semester: Classical period and nineteenth century.

*Not given in 1916-1917.

***155-156. Lessing: Introduction to Life and Works.** Two credit hours. The year. Mr. Eisenlohr.

First semester: Dramas. Second semester: Critical writings, to be conducted in German.

157. Volkslied. Two credit hours. First semester. Mr. Eisenlohr.

Studies in the origin and growth of the German folksong with special reference to German life and culture. To be conducted in German.

158. Volksbuecher, Maerchen, und Sagen. Two credit hours. Second semester. Mr. Eisenlohr.

Studies in popular and legendary literature. To be conducted in German.

159. Heine: Introduction to Life and Works. Two credit hours. First semester. Mr. Reese.

160. Heibel: Introduction to Life and Works. Two credit hours. Second semester. Mr. Reese.

***161-162. Romantic Writers.** Two credit hours. The year. Miss Thomas.

Lectures on the Romantic Movement with the reading of representative texts. First semester: Selections from Novalis, Tieck, Arnim. Second semester: Selections from Eichendorff, Uhland, Hoffmann.

163-164. Nineteenth Century Lyric. Two credit hours. The year. Mr. Lewisohn.

The form and content of German lyric poetry will be studied through intensive analysis of lyrics selected from the works of Goethe, Heine, and the Romanticists, Lenau, Moericke, Geibel, Meyer, Storm, and Liliencron.

171-172. Advanced Prose Composition. Two credit hours. The year. Open only on consent of instructor. Mr. Eisenlohr.

173. The Teaching of German. Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports, and practice teaching. Open only to seniors and graduate students.

***174. Grammar Review.** Two credit hours. Second semester. Mr. Evans.

A detailed discussion of theoretical grammar from the

*Not given in 1916-1917.

standpoint of the high school teacher. Open only to seniors and graduate students.

175. Phonetics. Two credit hours. First semester. No prerequisites. Not open to first and second year students. Miss Barrows.

Speech sounds with special reference to German, French and English.

176. Interpretative Reading. Two credit hours. Second semester. Mr. Keidel.

Practice in reading German; narrative and dramatic prose and verse. Not open to graduate students for credit.

177. Middle High German. Two credit hours. First semester. Mr. Busey.

Introductory course. Grammar and selected readings.

178. History of the German Language. Two credit hours. Second semester. Mr. Busey.

Lectures and illustrative readings, with special reference to the needs of those intending to teach.

For graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year.

107. Lysias and Plato. Three credit hours. First semester. Prerequisite, Greek 125-126.

Eight orations; with studies in Attic Procedure. Plato: Apology.

108. Plato and Euripides. Three credit hours. Second semester. Prerequisite, Greek 107.

Plato: Crito and Phaedo. Euripides, one play.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities.

123-124. Life and Literature of the Greeks. Two credit hours. The year. No prerequisite. Lectures on private life; on epic, lyric, and dramatic poetry; on the historians, the philosophers, and orators.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. **Thucydides and Demosthenes.** Two credit hours. First semester. Prerequisite, Greek 125-126.

Thucydides: Book I or Book VII. Demosthenes: Olynthiacs.

110. **Demosthenes and Theocritus.** Two credit hours. Second semester. Prerequisite, Greek 108.

Demosthenes: Philippics. Theocritus: Selections.

111. **Attic Drama.** Two credit hours. First semester. Prerequisite, Greek 108.

Euripides: *Alceste*. Sophocles: *Oedipus Tyrannus*, with lectures on scenic antiquities.

112. **Attic Drama.** Two credit hours. Second semester. Prerequisite, Greek 108.

Continuation of Greek 111, two plays.

113. **Epic Poetry and Aristophanes.** Two credit hours. First semester. Prerequisite, Greek 108.

Epic Poetry: Selections. Aristophanes: *The Birds*.

114. **Aristophanes and Post-Classical Greek.** Two credit hours. Second semester. Prerequisite, Greek 108.

Aristophanes: *The Clouds*. Post-Classical Greek: Lucian.

119. **Readings in Greek Philosophy.** Two credit hours. First semester. Prerequisite, Greek 108.

120. **Studies in New Testament Greek.** Two credit hours. Second semester. Prerequisite, Greek 108.

121-122. **Historical Greek Grammar.** Two to four credit hours, according to the needs of applicants. The year.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not pre-suppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

115-116, 121-122, 123-124, are planned to meet the needs of students who have no knowledge of Greek.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 107 Page Hall

PROFESSOR ANDERSON

101-102. **History of Education.** Three credit hours. The year. Prerequisite, Psychology 101-102.

Text: Graves' A History of Education (three volumes) and Graves' Great Educators of Three Centuries.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102, and Philosophy 151-152.

105-106. Educational Classics. Two credit hours. The year. Prerequisite, History of Education 101-102 and Psychology 101-102.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel, and Spencer. Reports and conferences.

107-108. Comparative Education. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England and the United States.

109-110. History of Education in the United States. Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

112. History of Industrial Education. Two credit hours. Second semester. Prerequisite, History of Education 101-102, or equivalent. Open to seniors and graduates only. Mr. Anderson.

For graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, New Home Economics Building

PROFESSORS WHITE AND DENTON, ASSISTANT PROFESSORS VAN METER AND HATHAWAY, MISS TUCKER, MRS. WALKER,

MISS SKINNER, MRS. ADAMS AND DEPARTMENT ASSISTANTS

101-102. Foods. Five credit hours. The year. Prerequisite, Chemistry 106 or 110. Miss White, Miss Skinner, Miss McGuire.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost and value of the nutrients in the various food materials. Lectures and quiz are combined with laboratory work.

104. Sanitation. Three credit hours. Either semester. Prerequisite or concurrent, Bacteriology 107. Miss Denton.

Location and construction of the house from the point of view of water supply, plumbing, heating, ventilating, and lighting. Interdependence of home and public agencies in securing sanitation and hygiene. Special attention is given to emergencies, first aid to the injured, and home nursing.

111-112. Textiles. Two credit hours. The year. Prerequisite, or concurrent, Art 119. Mrs. Walker, Miss Tucker, Miss Brady.

The study of fibers and fabrics from an historic, economic, and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs and a comparison with commercially prepared articles.

Students having had previous work should consult the instructor.

113. Dress. Three credit hours. Either semester. Lecture and laboratory. Prerequisite, Home Economics 111-112. Art 121 prerequisite or concurrent. Miss Hathaway, Miss Brady.

Economics, hygiene, design, and color in their relation to dress. The laboratory work includes the drafting and designing of patterns, the careful selection and combination of materials, and the making of a simple cloth dress.

116. Dress. Three credit hours. Second semester. Lecture and laboratory. Miss Hathaway, Miss Brady.

In the lectures an outline of the history of costume will be given, which may be taken as a one-hour lecture course without the laboratory. The laboratory work continues Home Economics 113 in the drafting and designing of patterns and includes the making of silk and draped dresses.

118. The House. Three credit hours. Either semester. Prerequisites, Economics 135, Art 131, 141, Home Economics 112. Home Economics 104 may be either prerequisite or concurrent. Miss Tucker.

A study of the evolution of the house and the principles underlying house arrangement, furnishing and decoration.

119. The House. Three credit hours. Either semester. Continuation of 118. Prerequisite, Economics 136, Art 141, Home Economics 102, 118. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

121. Advanced Study of Foods. Three credit hours. First semester. Prerequisites, Chemistry 106 or 110, Home Economics 101 and 102. Miss White, Miss Van Meter.

A continuation of the study of foods involving demonstrations of underlying principles and studies of economic and commercial food problems.

108. Teaching of Home Economics. Two credit hours. Second semester. Prerequisite, Home Economics 101-102, and 111-112; History of Education 101 or Principles of Education 101. Miss Van Meter, Miss Hathaway, Mrs. Adams.

This course is designed for students intending to teach Home Economics. Survey of Home Economics, examination of courses of study, lesson plans and study of various types of schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Seminar. Two to five credit hours. First semester. Open only to fourth year and graduate students. Readings and reports on Home Economics topics. Miss Van Meter.

Problems assigned for individual research.

106. Seminar. Two to five credit hours. Second semester. Continuation of Home Economics 105. Prerequisite, Home Economics 105 and consent of the instructor. Miss Van Meter.

Special research continued. Reports and conferences.

110. Dietetics. Four credit hours. Either semester. Prerequisites, Home Economics 101-102, Physiology 101-102, and Agricultural Chemistry 123-124. Miss Denton, Miss Skinner.

A study of the chemical, physiological, and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Laboratory work includes translation of standard dietaries into food materials and some exercise in making dietary studies. Practice is given also in preparation of food for the sick.

For graduate courses in this department see the *Bulletin of the Graduate School*.

HORTICULTURE

Office, 118 Horticulture and Forestry Building

PROFESSORS PADDOCK AND DAVIS, ASSISTANT PROFESSOR ELWOOD

101. Principles of Horticulture. Four credit hours. First semester. Lectures and two laboratory hours each week. No prerequisite. Mr. Davis.

A study of plant growth with special reference to orchard, garden, greenhouse, and nursery practice. The methods of plant propagation are studied in detail.

156. Landscape Architecture. Two credit hours. Second semester. Mr. Elwood.

A general study of the underlying principles of landscape architecture. This course is open to the general student-body and is supplemented by discussions from outside lecturers, who have made a special study of different phases of this profession. The practical application of the principles of landscape architecture will be covered as they relate to the development of public and private properties including farms, country estates, gardens and parks.

INDUSTRIAL ARTS

(See Shopwork)

ITALIAN

(See Romance Languages)

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS DERBY, HODGMAN AND ELDEN, MR. DUNLAP

147. Elementary Latin. Four credit hours. First semester.

Grammar and exercises. This course is offered to students who have not studied Latin.

148. Elementary Latin. Four credit hours. Second semester. Prerequisite, Latin 147.

Caesar, four books and exercises.

149. Cicero, Orations. Four credit hours. First semester. Prerequisite, Latin 147-148, or their equivalent.

150. Vergil, Aeneid. Four credit hours. Second semester. Prerequisite, Latin 147-149, or their equivalent.

101. Cicero, Livy, Horace. Four credit hours. First semester. Prerequisite, four units preparatory Latin. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Cicero: De Senectute and De Amicitia; or Livy; Horace: Odes.

102. Horace, Ovid, Livy, Sallust. Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Horace: Odes; or Ovid: Metamorphoses; Livy or Sallust, or Prose Composition.

103. Pliny or Cicero; Catullus or Tacitus. Three credit hours. First semester. Prerequisite, Latin 101-102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: Selected letters. Catullus or Tacitus.

104. Latin Comedy. Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. Roman Satire. Two credit hours. First semester. Prerequisite, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

106. The Roman Novel. Two credit hours. Second semester. Prerequisite, Latin 101-104. Mr. Hodgman.

Petronius; Seneca; Selections.

107-108. Roman Private Life. One credit hour. The year. Prerequisites, Latin 101, 102. Mr. Derby.

111-112. Roman and Comparative Literature. One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany, and England.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Roman Art and Archaeology. One or two credit hours. The year. Mr. Derby.

The course is open to undergraduates excepting Freshmen, and to graduates.

The development of the arts and crafts in early Italy, and especially of Roman architecture, sculpture, wall decoration, mosaic, gems and pottery. It is open not only to students of Latin, but also to other students who are interested in the subject.

113-114. Pro-Seminar. Three credit hours. The year. Prerequisite, Latin 101-104. Mr. Elden.

115-116. Latin Prose Composition. Three credit hours. The year. Prerequisites, Latin 101-104. Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122. Mr. Hodgman.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. Advanced Latin Composition. One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman.

Translation of English narrative and study of Latin idiom.

121. Roman Prose Authors. Two credit hours. First semester.

Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Sounds and inflections. Prerequisites, Latin 101-104. Mr. Hodgman.

Pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Syntax. Prerequisites, Latin 101-104. Mr. Elden.

Lectures on the problems connected with the origin and

development of certain constructions in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes, and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned readings on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of text-books; preparation of lessons; conduct of recitations; equipment, bibliography of books of reference, periodicals, etc.; illustrative exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

For graduate courses in this department see the Bulletin of the Graduate School.

MANUAL TRAINING

Office, 300 Hayes Hall

ASSISTANT PROFESSOR USRY

111. Teaching of Manual Training. Three credit hours. First semester. Manual Training, fourth year.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up its strength. Point of view in industrial and vocational education; the part-time, co-operative, and trade school; night and continuation schools.

112. Materials, Methods, and Equipment. Three credit hours. Second semester. Manual Training, fourth year.

Organization, equipment and its care; supplies, courses of study, methods of presentation of subject, general procedure.

117-118. Constructive Design. Two credit hours. The year. Manual Training, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of

material to project. These problems will cover work in the upper elementary grades and the secondary school.

121-122. Handwork for Supervisors. Two credit hours. The year. These courses should not be taken before the third year. Art 119, 131, 141, prerequisite or concurrent.

For elementary school supervisors of drawing, home economics, and manual training, suggesting means of correlating these subjects with the elementary school subjects.

Work in basketry, weaving, elementary woodwork, clay, and various other mediums of expression is made use of in suggesting the correlation.

Assigned readings and discussions along with the construction work.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. Special Problems in Manual Training. Two credit hours. Either semester. For superintendents and principals.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, costs, selection of teachers, salaries, and ways to help the teacher in service. Open to seniors or graduates, or to men of experience acceptable to the instructor.

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOARD, SWARTZEL, KUHN, RASOR
AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT
PROFESSORS PRESTON, BAREIS, WEST, MISS RICKARD

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German and Italian by the beginning of the junior year, and to take some courses in philosophy, particularly logic, in the junior and senior years.

121. College Algebra and Trigonometry. Three credit hours. Either semester. Two recitations and one two-hour problem period. Mr. Swartzel, Mr. Arnold, Mr. West.

122. Plane Trigonometry and Analytical Geometry. Three

credit hours. Either semester. Two recitations and one two-hour problem period. Mr. Swartzel, Mr. Arnold, Mr. West.

125-126. History of Elementary Mathematics. Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. Analytical Geometry and Calculus. Three credit hours. The year. Prerequisites, Mathematics 122 or 132. Mr. Kuhn.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisite, Entrance Algebra and Geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122, or 132. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite, Differential and Integral Calculus.

163-164. Plane and Solid Analytical Geometry. Three credit hours. The year.

***165-166. Advanced Calculus.** Three credit hours. The year.

167-168. Differential Equations. Three credit hours. The year. Mr. Bohannon.

***171-172. Projective Geometry.** Three credit hours. The year.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

*Not offered in 1916-1917.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

186. The Teaching of Mathematics. Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions and practice teaching.

For graduate courses in this department see the Bulletin of the Graduate School.

MILITARY SCIENCE AND TACTICS

Office, The Armory

CAPTAIN CONVERSE, U. S. A., RETIRED, LIEUTENANT THORPE,
U. S. A., RETIRED

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees, therefore, requires all male students, both special and regular, unless excused by the Military and Gymnasium Board, to drill during two years. This work is under two officers of the regular army, detailed for the purpose. The Military Department is open during five days each week throughout the year.

1. Military Drill. One credit hour. Five months, three hours each week (divided between fall and spring) military drill; four months, three hours each week (winter) of classroom instruction in drill regulations. Target practice at any open hour during the afternoon of the winter months, at 100, 200, and 300 yards. Lecture, one hour each week by the President, upon topics of common interest to the student body.

2. Military Drill. One credit hour. Five months, three hours each week (divided between fall and spring), in extended order and guard duty. Four months, three hours each week (winter) of classroom instruction in articles of war, guard manual, and field service regulations. Target practice, at any open hour of the afternoon of the winter months, at 500, 600, and 800 yards.

PHILOSOPHY

Office, 321 University Hall

PROFESSORS LEIGHTON AND DAVIES, ASSISTANT PROFESSOR
CHANDLER

101. Introduction to Philosophy. Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Chandler.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state, and religion.

102. Introductory Logic. Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Chandler.

A practice course in the methods of correct thinking.

105-106. Elementary Ethics. Three credit hours. The year. Not open to first year students. Mr. Davies.

An introduction to the study of the moral life as it appears in the individual and society.

115-116. Esthetics. Two credit hours. The year. Not open to first year students. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

151-152. History of Philosophy. Three credit hours. The year. Not open to first year students. Mr. Leighton, Mr. Chandler.

Philosophy 151 is not a prerequisite for Philosophy 152.

The history of reflective thinking on the problems of human life and the world-order will be traced in outline, from the dawn of Greek speculation to the rise of the modern doctrine of evolution. Constant regard will be had to the relation of philosophy to social, literary, and scientific movements.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***119. Philosophy of Religion.** Three credit hours. First semester. Prerequisite, one year's work in philosophy, psychology, or history of religion. Mr. Leighton.

*Not offered in 1916-1917.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

121-122. Metaphysics. Three credit hours. The year. Prerequisites, one year's work in philosophy and in psychology or a natural science. Mr. Leighton.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality, and theism.

***123-124. Representative Ancient Philosophers.** Three credit hours. The year. Mr. Chandler.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

125-126. Representative Modern Philosophers. Three credit hours. The year.

Selected works of Leibniz, Hume, Kant, and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

134. Political and Social Philosophy. Three credit hours. Second semester. Mr. Leighton.

The ethical values and aims involved in social institutions and their evolution, with especial reference to the state, the family, economic activities, and education; an examination of the ethical and metaphysical problems involved in the relation of the individual to society, and the philosophy of history.

***142. The Main Currents in Contemporary Philosophy.** Three credit hours. Second semester. Prerequisite, one year's work in philosophy, psychology, or sociology, or one year's work in the history of Nineteenth Century (English, French, or German) literature, or one year's work in biology. Mr. Leighton.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science, and social movements.

For graduate courses in this department see the Bulletin of the Graduate School.

*Not offered in 1916-1917.

PHYSICAL EDUCATION

MEN

Office, Gymnasium

PROFESSORS ST. JOHN, WILCE AND CASTLEMAN, MR. OHLSON,
MR. MARSH, MR. TRAUTMAN

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of all first-year students in this college. During the first semester the course consists of one lecture on personal hygiene and one period of active physical exercise each week.

Personal Hygiene. Lectures and quizzes on the cause, prevention, and hygienic treatments of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of the student.

Physical exercise in class; a graded course of free-hand exercises, with light hand apparatus for the relief and correction of slight bodily defects, improper carriage; graded progressive exercises to promote muscular tone, organic vigor, bodily skill; class dancing, gymnastic and athletic games and contests.

110. Theory of Physical Education. Two credit hours. Second semester. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

112. Principles of Coaching. Two credit hours. Second semester. Mr. St. John, Mr. Wilce, Mr. Castleman.

Instruction in the organization, conduct and coaching theory and practice of competitive athletic games, football, basketball, baseball and track.

Prerequisite, Physical Education 110. Students may satisfy prerequisite requirement in 1917 by taking 110 and 112 during the same semester.

The above courses are open to juniors and seniors on the approval of the Director of the Department of Physical Education and the Dean of the College of Education. It is desirable, though not at present required, that courses in physiology, psychology, and anatomy precede the above courses.

MEDICAL EMERGENCY SECTION

Office, 103 Biological Hall

DR. WINGERT

This department maintains a medical emergency section, open to all students, male or female, in the department. Emergency medical advice and treatment is furnished free to students while on the campus, during regular University hours.

WOMEN

Office, the Gymnasium

ASSISTANT PROFESSOR MEYER, MISS HAMMETT

131-132. Physical Education. One credit hour. The year. Four hours each week. Required of all women students during the first year of attendance at the University.

Lectures on personal hygiene.

Gymnasium exercises, elementary Swedish gymnastics, calisthenics, drills with wands, Indian clubs, etc. Folk dances, technique of aesthetic dancing, and gymnastic games.

133-134. Physical Education. One credit hour. The year. Four hours each week for second year students; required of all women students.

Lectures on principles of physical education.

Gymnasium exercises: a continuation of Physical Education 131-132.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Two lectures, three hours' practice each week. Miss Meyer.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Two lectures and three hours' practice each week. Miss Meyer.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

The above courses are open only to juniors and seniors on approval of the Department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing courses 135 and 136 should have had courses in anatomy, physiology, psychology, and history of education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARHART, BLAKE, BARNETT AND SHEARD,
ASSISTANT PROFESSOR ALPHEUS W. SMITH, MR. HEIL, MR.
WOODBURY, MR. ALVA W. SMITH, AND
DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures and laboratory. A non-mathematical course for students who have no entrance credit in physics. Mr. Earhart.

105-106. General Physics. Four credit hours. The year. Prerequisite, entrance credit in physics. Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Smith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Smith.

This course alternates with Physics 143-144.

***143-144. Advanced Light and Electricity.** Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106, Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism. Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. Physical Seminar. One credit hour. The year. Prerequisite, two years of college work in physics or one year in physics and one in mathematics or chemistry. Mr. Cole.

147. Molecular Physics and Heat. Three credit hours. First semester. Prerequisites, Physics 103-104, or 105-106, and Mathematics 141-142, or 127-128.

148. Conduction of Electricity Through Gases and Radioactivity. Three credit hours. Second semester. Prerequisites,

*Not given in 1916-1917.

Physics 103-104, or 105-106, and Mathematics 141-142, or 127-128.

This course alternates with Physics 143-144.

169-170. Theoretical Physics. Two credit hours. The year. Prerequisite, Physics 105-106, and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

For graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY

Office, 204 Biological Hall

PROFESSOR BLEILE, ASSOCIATE PROFESSOR SEYMOUR, ASSISTANT PROFESSOR DURRANT, MR. H. R. WRIGHT

101-102. Physiology. Three credit hours. The year. Not open to freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant, Mr. Wright.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including demonstrations in circulation, digestion, respiration, gross and minute anatomy, reflex actions, and other simple phenomena of living organisms.

119-120. General Physiology. Three credit hours. The year. Not open to freshmen. Mr. Bleile.

A course similar to 101-102 open to students who have no credit in chemistry. (Students who have had chemistry will elect Physiology 101-102.) A course presenting the principles of physiology in a non-chemical manner.

104. Chemical Physiology. Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Bleile.

A laboratory course with lectures and recitations. The course includes laboratory study of foods, digestion, secretions, excretions, and blood, with a short period devoted to uranalysis.

105-106. Histology and Histo-Chemistry. Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the structure of the tissues and organs of the animal body. The second semester is devoted to laboratory work in the physiology of the body fluids, foods and metabolism.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations, and assigned readings. The content of the course varies from year to year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation, and secretion.

111-112. Physiological Laboratory. Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

For graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 200 University Hall

PROFESSORS SPENCER AND COKER

133-134. Government in the United States. Three credit hours. The year. Mr. Spencer, Mr. Coker.

A study of the organization, powers, and practical workings of government in the United States—national, state and local, also of non-governmental political agencies such as parties. The first semester will be devoted to the federal government, the second semester to state and local government. The study will include at the outset a general survey of the field of political science. Not open to freshmen. It is strongly recommended that it be preceded by a year's work in European or American History.

Political Science 133 is given also during the second semester.

***102. The Governments of Europe.** Three credit hours. First semester. Mr. Spencer, Mr. Coker.

A comparative study of the principal countries of Europe, with particular attention to characteristic institutions; the English cabinet system; federal organization in Germany and Switzerland; the problem of imperial organization.

*Not given in 1916-1917.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 107 Page Hall

ASSOCIATE PROFESSOR LOWDEN, PROFESSOR TWISS,
ASSISTANT PROFESSOR CLIFTON

101. Principles of Education. Three credit hours. First semester. Prerequisite, History of Education 101-102.

A review of educational theory and the principles underlying teaching.

104. Observation, Criticism, and Practice. Three credit hours. Second semester. Prerequisite, Principles and Practice of Education 101.

A study of the general and special method; observation and criticism of class-room work in high school. Practice in teaching, ten weeks.

105. Biological Principles in Education. Three credit hours. First semester. Prerequisite, Physiology 101 or equivalent.

This course is for undergraduate students, but by additional prescribed readings and reports may be applied as graduate credit. This course investigates the principles of education from the standpoint of biology, anthropology, physiology, and hygiene.

106. Plant, Animal, and Human Behavior. Three credit hours. Second semester. Prerequisite, Physiology 101 or 105, or a preparation adequate to do the work of the course.

The course is a study of behavior in plants, animals, and man in search for guiding educational principles.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. Advanced Principles of Education. Three credit hours. The year. Prerequisites, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology, and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

PSYCHOLOGY

Office, 404 University Hall

PROFESSORS ARPS AND HAINES, ASSISTANT PROFESSORS PINTNER AND WEISS, MR. EVANS, MR. CRANE, MR. BRIDGES, MR. DALLENBACH, MISS GOUDGE, AND DEPARTMENT ASSISTANTS

101-102. Elementary Psychology. Introductory course. Three credit hours. The year. All instructors.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

Psychology 111 may be taken with Psychology 102.

103-104. Elementary Psychology. Two credit hours. The year. Students electing this course must take Psychology 111 in conjunction with 104. Mr. Arps.

107-108. Educational Psychology. Two credit hours. The year. Prerequisites, Psychology 101-102 or 103-104. Mr. Pintner, Mr. Evans.

111-112. Experimental Psychology. Three credit hours. The year. Lecture and laboratory. Prerequisites, Psychology 101-102 or concurrent with 102. Mr. Arps, Mr. Weiss.

Psychology 111 is given also during the second semester.

Psychology 112 is given also during the first semester.

A systematic training course in the method of introspection, which brings one to a first-hand acquaintance with the facts of the mental life. Topics: The sense fields, geometrical optical illusions, stereoscopic and pseudoscopic illusions, tactual space perception, auditory localization, attention, reaction-time, memory types, tonal fusion, association, and analysis of judgment.

114. Mental and Social Measurements. Two credit hours. First semester. Prerequisites, Psychology 101-102 or 103-104. Given biennially, alternating with Psychology 118. Mr. Weiss.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education and the social sciences. Topics: Standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

***118. Perception and Behavior.** Two credit hours. Second semester. Given biennially, alternating with course 114. Prerequisite, Psychology 111. Mr. Weiss.

A consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on, the original nature of man, the function of the nervous system, and the interaction among individuals.

115-116. Genetic Psychology. Two credit hours. The year. Prerequisites, Psychology 101-102 or 103-104. Mr. Evans.

The natural history of the development of the mind. The important transitional periods in the life of the individual. The characteristics of the child mind and the laws of mental life will receive special attention.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisites, Psychology 101-102 or 103-104. Mr. Bridges.

This course is adapted to meet the needs of medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: Nervous elements and their functions; end organs and their functions; cerebral functions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***119. Animal Psychology.** Three credit hours. Second semester. Prerequisites, Psychology 101-102 or 103-104. Mr. Bridges.

It is desirable that students shall have had work in zoology, or experimental psychology.

A survey of animal behavior from the lower to the higher forms with especial emphasis upon the development of tropisms and instinctive reactions and their relation to the learning process in human behavior. A few typical experiments will be studied in the laboratory.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisites, Psychology 101-102 or 103-104. Mr. Bridges, Mr. Haines.

*Not given in 1916-1917.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisites, Psychology 101-102 or 103-104. Mr. Pintner, Mr. Haines.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feeble-minded. The causes of the same. Lectures, recitations, and clinics.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

A study of the nature and variety of inherited tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality; application to the problems of society, school conditions, and educational aims.

***126. Folk Psychology.** Three credit hours. Second semester. Prerequisites, Psychology 101-102 or 103-104. Mr. Evans.

The psychic factors involved in group activities, religious rites, myths, tribal customs, language, art.

128. Psychology of Advertising. Two credit hours. Second semester. Prerequisite, Psychology 103-104, or 101-102. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and emotions to effective advertising. Lectures, reports and investigation of practical problems in the laboratory.

129-130. Advanced Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

This course is intended for students who desire a more detailed knowledge of the normal mental processes than is possible in an introductory course. A course fundamental to all fields of psychology and philosophy and to allied fields which involve human behavior. This course is mainly a consideration of the cognitive processes.

133-134. Mental Tests. Three credit hours. The year.

Prerequisite, Psychology 111-112 or 107-108 or 121-122. Mr. Pintner, Mr. Evans.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

137-138. Psychology of Emotion and Volition. Two credit hours. The year. Prerequisites, Psychology 129-130. Mr. Arps.

A study of the various theories of feeling and emotion; the relation of the affective processes to the life of cognition; theories of volition; determinism; sources of action; diseases of the will and their relation to social problems.

139-140. History of Psychology. Two credit hours. The year. Prerequisite, Psychology 137-138. Mr. Arps.

The principal aim of this course is to trace modern psychology back to its historical antecedents. This will include a consideration of the early metaphysical and empirical tendencies, the development of the fundamental concepts of psychology, and a history of the most important psychological theories such as the theories of sensation, space perception, feeling and volition.

141-142. Minor Research. Two or more credit hours. The year. Prerequisite, at least twelve hours in psychology. Mr. Arps, Mr. Pintner, Mr. Weiss.

Investigation of minor problems in the various fields of psychology.

147-148. The Psychological Clinic. One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pintner, Mr. Evans.

Practical work in the diagnosis of defective and exceptional children.

155. The Treatment of Exceptional Children. Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual

defects, moral eccentricities. Lectures, reports, and practical work with children.

For graduate courses in this department see the Bulletin of the Graduate School.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 305 University Hall

PROFESSORS BOWEN, BRUCE AND INGRAHAM, ASSISTANT PROFESSORS HAMILTON, CHAPIN AND PEIRCE, MR. DITCHY, MR. MOORE, MR. CARDON, AND DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French except French 106. French 117 to 120 inclusive must be preceded by French 107, 109, and 110, or an equivalent.

The undergraduate courses offered in French, and to some extent in Spanish, beginning with third-year collegiate work, fall into two general groups: (1) literary, (2) linguistic and practical; so that students may emphasize one or both of these lines of study. For students who enter with two years of high school French and who desire to major in French the following outline course is recommended:

First year: French 103-104.

Second year: French 107 and 109-110.

Third year: French 108, 111-112 and 113-114 or 115-116.

Fourth year: French 117-118, 119-120 and 122.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar: Fraser and Squair's, or equivalent. Reader: Aldrich and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. All instructors.

Stress is laid first upon the acquisition of a correct pronunciation, after which the entire energy of the student is directed toward the attainment of a full and accurate reading knowledge of the language. Grammar and composition made to contribute to this end. Sight reading is emphasized.

French 101 is given also during the second semester.

103-104. Modern French Literature. Four credit hours. The year. Prerequisite, French 101-102, or an equivalent. Mr. Bruce, Mr. Hamilton, Mr. Chapin, Mr. Peirce, Mr. Ditchy, Mr. Moore, Mr. Cardon.

The work of the year deals with the following subjects: (1) Contes; (2) The novel (Balzac or Hugo); (3) Lyric poetry; (4) Romantic drama (Hugo). Prose composition with practice in speaking. Systematic attention given to syntax and idiom. Lectures supplement the work. Private reading required.

106. Science Reading. Four credit hours. Second semester. Prerequisite, French 103. Mr. Chapin.

A course of rapid reading introductory to the vocabulary of scientific literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107. Advanced Prose Composition. Two credit hours. First semester. Mr. Cardon.

Cameron's French Composition, followed by other selections. Dictation. Conversation. The course is conducted mainly in French.

108. History of French Literature. Two credit hours. Second semester. Lectures and illustrative readings. Mr. Cardon.

109. Seventeenth Century Drama: Molière and Corneille. Three credit hours. First semester. Mr. Peirce.

Lectures on the growth of French comedy and tragedy. Critical study of representative plays of Molière, Regnard, and Corneille. Collateral reading. Assigned topics and reports.

110. Seventeenth Century Tragedy and Prose. Three credit hours. Second semester. Mr. Peirce.

Representative dramas of Racine; Hachette's Theatre Choisi de Racine. Study of Descartes, Pascal, La Bruyère and others; Warren's Selections. Lectures, with collateral reading and reports.

111. Eighteenth Century Drama. Two credit hours. First semester. Prerequisite, French 109 and 110. Mr. Bruce.

Lectures on French comedy after Molière, with work centering on Marivaux and Beaumarchais. Study of the drama of Voltaire. Collateral reading and reports.

112. Nineteenth Century Drama. Two credit hours. Second semester. Prerequisite, French 109 and 110. Mr. Bruce.

Tendencies of French drama during the nineteenth cen-

tury, with special reference to Scribe, Augier, Dumas fils, and Sardou. Lectures, with collateral reading and reports.

***113. Recent French Prose.** Two credit hours. First semester. Given biennially, alternating with French 115. Mr. Bruce.

Rapid reading with lectures. Selections from the works of such writers as Bazin, Bourget, Loti, and Bordeaux.

***114. Practice in Speaking and Writing French.** Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 116. Mr. Cardon.

115. Eighteenth Century Prose. Two credit hours. First semester. Given biennially, alternating with French 113. Mr. Bruce, or Mr. Bowen.

Selections from Voltaire (ed. Cohn and Woodward), Rousseau, and others.

116. Advanced Conversational Practice. Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 114. Mr. Cardon.

117-118. French Seminar A. Two credit hours. The year. These courses are open only to seniors and graduates. Mr. Bowen.

Studies in specific literary fields. The subject for 1916-1917 will probably be: Recent and contemporary French drama.

119-120. French Seminar B. Two credit hours. The year. Mr. Bowen.

Studies in old French (with emphasis on la Chanson de Roland) and in the language and writers of the sixteenth century. Special consideration of Montaigne.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Bowen.

Historical and critical survey of the methods of teaching French. The teacher's equipment. Class room aids. Special problems and difficulties in the teaching of French. Lectures; discussions; practice in conducting recitations.

*Not given in 1916-1917.

ITALIAN

101-102. Elementary Italian. Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Students are advised to postpone the election of this course until they have completed French 101-102, or an equivalent. Mr. Bruce.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Italian Novel. Two credit hours. First semester. Manzoni (*I Promessi Sposi*, and others). Lectures. Prerequisite, Italian 101-102. Mr. Bruce.

104. Dante. Two credit hours. Second semester. Selections from the *Inferno* and *Paradiso*. Lectures. Prerequisite, Italian 103. Mr. Bruce.

SPANISH

101-102. Elementary Spanish. Four credit hours. The year. Grammar: Ingraham-Edgren's, and Ingraham's *Victoria y Otros Cuentos*. Easy prose and plays. Composition and practice in speaking. Mr. Ingraham, Mr. Hamilton, Mr. Chapin, Mr. Ditchy, Mr. Moore, and department assistants.

Spanish 101 is given also during the second semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Modern Spanish Literature. Four credit hours. The year. Prerequisite, Spanish 101-102, or an equivalent. Mr. Ingraham, Mr. Chapin.

The modern novel and drama. Lectures covering a survey of the literature. Composition and practice in speaking continued.

105. Cervantes: Don Quijote. Two credit hours. First semester. Prerequisite, Spanish 103-104. Given biennially, alternating with Spanish 107. Mr. Ingraham.

106. Lope de Vega and Calderon. Two credit hours. Second semester. Prerequisite, Spanish 105. Given biennially, alternating with Spanish 108. Mr. Ingraham.

***107. The Pastoral Novel and the Romance of Roguery.** Two credit hours. First semester. Prerequisite, Spanish 103-104. Given biennially, alternating with Spanish 105. Mr. Ingraham.

*Not given in 1916-1917.

***108. Contemporaries of Lope de Vega and Calderon.** Two credit hours. Second semester. Prerequisite, Spanish 107. Given biennially, alternating with Spanish 106. Mr. Ingraham.

110. Commercial Reading and Correspondence. Four credit hours. Second semester. Prerequisite, Spanish 103. Mr. Chapin.

A course designed to familiarize students with the vocabulary of business and with the forms of Spanish commercial paper and correspondence.

For graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS

Office, 100 Townshend Hall

PROFESSOR VOGT, ASSISTANT PROFESSORS T. D. PHILLIPS
AND FALCONER

101. Farm Accounting. Two credit hours. Either semester. Mr. Phillips.

Lectures and practice work. The course deals with the general principles of accounting and their application to farm business. Systems of keeping farm records that are best adapted to different methods of farming are studied.

110. Rural Community Life. Three credit hours. Second semester.

Lectures and recitations on rural organizations and community life. The rural church, rural school, rural home, and farmers' organizations and their bearing upon country life are studied.

For graduate courses in this department see the Bulletin of the Graduate School.

SCHOOL ADMINISTRATION

Office, 103 Page Hall

PROFESSOR BROWN

101. Public Education in the United States. Three credit hours. First semester. Open to advanced undergraduates. Lectures and readings. An introductory survey of American public education as the expression and promoter of democracy. School laws, regulations, decisions of Ohio.

*Not given in 1916-1917.

102. State School Administration. Three credit hours. Second semester. Open to advanced undergraduates. Lectures and readings. Federal and state policies. Forms of control. Revenue and apportionment. The state and the teacher. The state and the child. The state and non-state education.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111. Secondary School Administration. Three credit hours. First semester. Lectures, readings. Elective system, organization, control, curricula. Relation to higher and elementary education.

112. Secondary School Administration. Three credit hours. Second semester. Lectures, readings. Social life and organizations, athletics, buildings and equipment, vocational guidance and training, retardation and elimination. Objective standards.

113. Elementary School Administration. Three credit hours. First semester. Lectures, readings. Organization, grading, promotion. Delinquents, laggards, elimination. Curricula, texts, supplies.

114. Elementary School Administration. Three credit hours. Second semester. Lectures, readings. Buildings, equipment, grounds. Relation to secondary and vocational education. Efficiency tests and records. Social activities. Cost.

***115. Educational Statistics.** Two credit hours. First semester. Open to superintendents, principals, and graduates of experience, by permission of instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. City School Administration. Three credit hours. Second semester. Open to superintendents, principals, and graduates of experience by permission of instructor in charge. Seminar. Prerequisite, Psychology 101-102 and, for graduate work Principles and Practice of Education 101-104. Mr. Brown.

Comparative studies and administrative principles applicable to them. Thesis on some problem involved.

For graduate courses in this department see the Bulletin of the Graduate School.

AGRICULTURAL EDUCATION

122. The Teaching of Agriculture in the High School. Two credit hours. Second semester.

*Not given in 1916-1917.

The administrative phases of secondary agriculture, the application of the principles of pedagogy to the teaching of agriculture in the high school, and the organization of agricultural materials into secondary courses of study will constitute the essential features. Intended for superintendents, principals, and teachers of secondary agriculture in the high schools of the state. Text-book: Bricker's "The Teaching of Agriculture in the High School."

123-124. The Elements of General Agriculture. Three credit hours. The year.

This course is designed to furnish a general fund of knowledge of the science and art of agriculture as a basis for pedagogical study, and preparation to teach either elementary or secondary agriculture in the public schools of Ohio. It will also furnish an excellent basis for the further pursuit of the more specialized divisions of agriculture offered in the College of Agriculture. The work of the first semester will consist of plant studies, animal studies, and studies in farm management; and machine studies, soil studies, and studies of the conditions of plant growth will be considered during the second semester. The last topic will include work in the greenhouse, the demonstration field, and investigations of plant diseases and insect pests, together with remedial measures.

127. History of Agricultural Education. Two credit hours. First semester.

A survey of the rise and development of agricultural instruction in the United States. The land-grant colleges, the agricultural experiment stations, secondary and elementary school instruction, farmers' institutes, agricultural societies, the club movement, etc. Ohio agricultural educational institutions.

132. Teaching of Elementary Agriculture. Two credit hours. First semester.

This course is designed to meet the pedagogical requirements of township superintendents, rural teachers, and teachers in village elementary schools. The present status of agricultural instruction in the elementary schools, the arrangement of the materials of elementary agriculture into a course of study, the methods of presentation of the subject matter, and the

organization and use of popular auxiliaries to public school instruction in agriculture will be considered.

SHOPWORK

Office, New Shop Building

PROFESSOR SANBORN, ASSOCIATE PROFESSOR KNIGHT, MR. CASE,
MR. BEEM, MR. FOUST, MR. DENMAN, AND DEPART-
MENT ASSISTANTS

105. Foundry Work. Two credit hours. Either semester. Manual Training, first year. Mr. Beem, Mr. Breckur.

113. Cabinet Making. Two credit hours. Either semester. Prerequisite, Shopwork 133. Manual Training, third year. Mr. Beem, Mr. Smith.

115. Forging. Two credit hours. Either semester. Manual Training, third year. Mr. Foust, Mr. Wright.

118. Advanced Forging. Two credit hours. Second semester. Prerequisite, Shopwork 115. Manual Training, fourth year. Mr. Foust.

119. Machine Work. Three credit hours. Either semester. Manual Training, third year. Mr. Knight, Mr. Case.

121. Advanced Machine Work. Three credit hours. Either semester. Prerequisite, Shopwork 119. Option, Manual Training, fourth year. Mr. Knight, Mr. Case.

123. Advanced Machine Work. Two credit hours. First semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

125. Construction Work. Two credit hours. Either semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

129-130. Wood Turning and Pattern Making. Three credit hours. The year. Prerequisite, Shopwork 133. Manual Training, second year. Mr. Beem, Mr. Smith.

131. Advanced Cabinet Work. Three credit hours. First semester. Prerequisite, Shopwork 113. Option, Manual Training, fourth year. Mr. Beem, Mr. Smith.

133. Elementary Woodwork. Two credit hours. Second semester. Manual Training, first year. Mr. Beem, Mr. Smith.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSOR OSBORN, ASSOCIATE PROFESSOR HINE, ASSISTANT
PROFESSORS BARROWS, KRECKER AND METCALF, MR.
KOSTIR, AND DEPARTMENT ASSISTANTS

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Laboratory and lectures. Mr. Osborn, Mr. Barrows, Mr. Krecker, Mr. Kostir and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology. A foundation for more advanced courses.

Zoology 101 is given also during the second semester.

121-122. Invertebrate Morphology. Three to five credit hours. The year. Prerequisite, Zoology 101-102. Mr. Kostir.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osborn, Mr. Barrows, Mr. Krecker.

The facts and theories of the origin, development, and distribution of animal life. The first semester deals chiefly with variation, isolation, and heredity as the fundamental factors in evolution of animal forms. The second semester is devoted to geographical distribution, adaptations, and the application of the laws of heredity to practical problems.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year in biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year in biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

For graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. Economic Entomology. Three credit hours. The year. Prerequisite, Zoology 101-102. Mr. Osborn, Mr. Metcalf.

A systematic study of groups of insects, with special reference to injuries and beneficial species. A foundation is laid for special study in entomology. Preparation of collections, essays, life studies, and use of remedial measures, along with laboratory studies on general anatomy.

For graduate courses in this department see the Bulletin of the Graduate School.

GENERAL INFORMATION

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of thirty-five dollars is offered for the best essay on the principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the head of the department of American History.

APPOINTMENT COMMITTEE

In order to serve the schools of the State, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Secretary, Mr. L. E. Wolfe. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the committee.

FEES AND EXPENSES

All fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until fees are paid.

Incidental Fee—The fee for all students is fifteen dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit of ten dollars for each course requiring such supplies is made at the Bursar's office before the work is begun. All laboratory supplies are sold at the General Store

Room, Chemistry Hall, to students at first cost to the University, and charged against the deposits. Any unused part of the deposit is refunded at the end of the semester.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

Cadet Uniform. The uniform with which the members of the regiment are required to provide themselves costs (without overcoat) about twelve dollars. It is quiet in pattern, and may be worn in place of civilian dress. New students are advised against buying second-hand uniforms unless they have been previously inspected and approved by the Commandant. Inspection has shown in many cases that second-hand uniforms were unfit to wear and certainly not worth the price asked for them. All such uniforms are subject to rejection by the Commandant. Students should not arrange for uniforms until so directed by the military authorities.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid on or before the last Friday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Text-books. Students should not purchase text-books until they are advised by the instructors of their respective classes.

WOMEN STUDENTS

As far as possible women students should make arrangements for room and board in advance. An effort will be made to secure suitable accommodations in private residences for such as cannot be accommodated in Oxley Hall. Prospective women students should address Miss Caroline Breyfogle, Dean of Women, The Ohio State University, Columbus, Ohio.

EXPENSES PER YEAR

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost for the freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Registration fee	\$30.00
Ohio Union	2 00
Gymnasium locker	4 00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	20 00
Cadet uniform	12 00
Books	15 00
Board—36 weeks at \$3.50 per week.....	126 00
Room rent, at \$8.00 per month.....	72 00
General expenses	100 00
	<hr/>
	\$381 00

The item of general expenses is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

In order to meet all the necessary expenses of registration, books, uniform, and other expenditures incident to securing a room and board, a student should come prepared to expend from sixty-five to seventy-five dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$300 for the academic year and in addition all fees are remitted, except a diploma fee, for those students who receive degrees. At present there are such assistantships in Agricultural Chemistry, American History, Bacteriology, Botany, Chemistry, Economics, English, Geology, German, Mathematics, Physics, Psychology, Romance Languages, Zoology, and a few others in technical and professional colleges. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the Graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$250 with exemption from all fixed fees. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applications not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

TIME SCHEDULE**COLLEGES OF ARTS AND EDUCATION**

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect, provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Departments of Instruction without first consulting the secretary of their college.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours per semester of the course.

KEY TO ABBREVIATIONS

- Bi.—Biological Building
- B. Z.—Botany and Zoology Building
- Br.—Brown Hall
- Ch.—Chemistry Hall
- Ha.—Hayes Hall
- H. E.—Home Economics Building
- H. F.—Horticulture and Forestry Building
- L.—Library
- Lo.—Lord Hall
- Obs.—Observatory
- O.—Orton Hall
- P.—Page Hall
- Pav.—Judging Pavilion
- Ph.—Physics Building
- R. L.—Robinson Laboratory
- S.—New Shop Building
- T.—Townshend Hall
- U.—University Hall
- V. C.—Veterinary Clinic
- V. L.—Veterinary Laboratory

L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

AGRICULTURAL CHEMISTRY AND SOILS

Agricultural Chemistry

Course No.	Hours	Time	Room	Instructor
123	4	L., Tu., at 9	T. 205	Lyman Phillips
		Tu., at 2	T. 205	Lyman Phillips
		Q., Th., at 9	T. 205	Lyman Phillips
		Th., at 2	T. 205	Lyman Phillips
		Lab., M., W., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	

Soils

152	5	L., M., W., at 8	T. 205	Vivian
		M., W., at 1	T. 205	Vivian
		Q. F., at 8	T. 205	
		F., at 1	T. 205	
		Lab., M., W., 8 to 11	T. 210	
		Tu., Th., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	
		Tu., Th., 1 to 4	T. 210	

AGRICULTURAL ENGINEERING

101	4	M., W., F., at 10	H. F. 206	Ramsower
		Lab., M., 1 to 4		
		Tu., 1 to 4		
		W., 1 to 4		
		F., 1 to 4		
101	4	M., W., F., at 3	H. F. 204	Ramsower
		Lab., Tu., 8 to 11		
		W., 8 to 11		
		Th., 8 to 11		
		F., 8 to 11		

AMERICAN HISTORY

101-102	3	M., W., F., at 8	U. 205	Schlesinger Hockett
		M., W., F., at 8	U. 209	Wood
		M., W., F., at 9	U. 205	
		M., W., F., at 9	U. 209	Wood
		M., W., F., at 10	U. 209	
		M., W., F., at 1	U. 205	Schlesinger
		M., W., F., at 1	U. 209	Wood
		M., W., F., at 1	L. 107	

AMERICAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 3	U. 205	Schlesinger
		M., W., F., at 3	U. 209	
		M., W., F., at 4	U. 205	Hockett
102-101	2	M., W., F., at 10	U. 205	Wood
101	3	M., W., F., at 2	U. 209	
107-108	2	Tu., Th., at 1	U. 205	Hockett
109-110	2	Tu., Th., at 8	U. 205	Schlesinger
111-112	3	M., W., F., at 2	U. 205	Schlesinger
115-116	3	M., W., F., at 3	L. 107	Hockett
119-120	2	Tu., Th., at 3	L. 303	Hockett
121	2	Tu., Th., at 9	U. 205	Knight
123-124	3	M., W., F., at 9	L. 107	Knight
125-126	2	Tu., Th., at 10	U. 205	Wood
203-204	2	To be arranged		
205-206	2	W., 4 to 6	L. 303	Knight
207-208	2	M., 4 to 6	L. 303	Knight

ANATOMY

101	3 to 5	L., W., at 1	Bio. 107	Landacre
		Lab., W., Th., F., after- noons		
102	3 to 5	L., Tu., at 8	Bio. 100	Landacre
		Lab., Tu., Th., 8 to 11		
		For 5 credit hours Tu, Th., F., afternoons		
103-104	3 to 5	L., Tu., at 1	Bio. 107	Landacre
		Lab., W., Th., F., after- noons		
105-106	3 to 5	To be arranged	Bio.	Landacre
107-108	3 to 5	To be arranged	Bio.	Landacre
109-110	3 to 5	L., M., at 1	Bio. 107	Landacre
		Lab., to be arranged		
111-112	1	M., at 4	Bio. 103	Landacre
113-114	3 to 5	To be arranged	Bio.	Landacre
121	6	To be arranged	Bio.	Landacre
122	4	To be arranged	Bio.	Landacre
127	3	To be arranged	Bio.	Landacre
133	6	To be arranged	Bio.	Landacre
134	4	To be arranged	Bio.	Landacre
136	4	To be arranged	Bio.	Landacre
142(Vet)	4	To be arranged	Bio.	Landacre
152	3	To be arranged	Bio.	Landacre

ANIMAL HUSBANDRY

103-104	4	M., W., F., at 10	Pav.	Kays
		Lab., M., 1 to 3	Pav.	

ART

Course No.	Hours	Time	Room	Instructor
117	3	To be arranged	Ha.	Robinson
119-119	1	F., at 8	Ha. 204	Kelley
		F., at 1	Ha. 204	Kelley
121	2	Tu., Th., 9 to 11	Ha. 303	Shepherd
121	2	Tu., Th., 1 to 3	Ha. 303	Shepherd
131	2	M., W., 8 to 10	Ha. 303	Shepherd
		M., W., 1 to 3	Ha. 303	Norris
		Tu., Th., 8 to 10	Ha. 303	Christensen
		Tu., Th., 1 to 3	Ha. 303	Robinson
131	2	Tu., Th., 8 to 10	Ha. 303	Norris
132	2	M., W., 1 to 3	Ha. 303	Shepherd
132	2	Tu., Th., 8 to 10	Ha. 303	Robinson
		M., W., 9 to 11	Ha. 303	Norris
133	2	M., W., 9 to 11	Ha. 303	Norris
		W., F., 9 to 11	Ha. 303	Robinson
133	2	Tu., Th., 2 to 4	Ha. 303	Robinson
134-134	3	Tu., Th., 8 to 11	Ha. 303	Kelley
135-135	4	Tu., Th., 1 to 4	Ha. 303	Norris
136	2	Tu., Th., 9 to 11	Ha. 303	Shepherd
136	2	M., W., 9 to 11	Ha. 303	Shepherd
		Tu., Th., 9 to 11	Ha. 303	Shepherd
137	3	M., W., 8 to 11	Ha. 303	Shepherd
138	3	To be arranged	Ha.	Kelley
139	3	To be arranged	Ha.	Robinson
141	2	Tu., Th., at 10	Ha. 204	Robinson
141	2	Tu., Th., at 8	Ha. 204	Shepherd
		Tu., Th., at 10	Ha. 204	Kelley
		Tu., Th., at 1	Ha. 204	Robinson
		Tu., Th., at 3	Ha. 204	Kelley
142	3	M., W., 8 to 10	Ha. 303	Robinson
142	3	M., W., 8 to 10	Ha. 303	Robinson
143	3	M., W., at 9	Ha. 204	Kelley
144	3	M., W., at 8	Ha. 204	Norris
145	3	To be arranged	Ha.	
151-152	3	M., W., F., at 10	Ha. 204	Christensen
151	3	M., W., F., at 8	Ha. 200	Christensen
153	3	M., W., F., at 8	Ha. 200	Christensen
154-155	2	Tu., Th., at 2	Ha. 200	Christensen
156	2	Tu., Th., at 4	Ha. 200	Robinson
157	3	M., W., F., at 10	Ha. 200	Kelley
158	5	To be arranged	Ha.	Kelley

ASTRONOMY

101-102	3	M., W., F., at 8	Obs.	Manson
		M., W., F., at 1	Obs.	Manson
104-	3	M., W., F., 9 to 11	Obs.	Lord
				Manson

ASTRONOMY—Continued

Course No.	Hours	Time	Room	Instructor
105	3	M., W., F., 2 to 4 Tu., at 10; Th., F., 1 to 4 W., at 3; M., Tu., 2 to 5	Obs. Obs.	
107-108	3 to 5	To be arranged	Obs.	Lord Manson
109-110	4	To be arranged	Obs.	Lord
111-112	3 to 5	To be arranged	Obs.	Manson

BACTERIOLOGY

102	2	L., Th., at 8 Lab., Th., 1 to 4	V. L. 8 V. L. 201	Froning Froning
107	4 or 5	L., M., W., at 9 M., W., at 2 Lab., for Home Economics only Tu., Th., 8 to 11 Tu., Th., 1 to 4 Lab., M., W., 8 to 11 M., W., 1 to 4 M., 1 to 4; Sat., 8 to 11	V. L. 101 V. L. 101 V. L. 205 V. L. 205 V. L. 201, 205 V. L. 201, 205 V. L. 201, 205	Morrey Morrey McCoy Froning McCoy Froning McCoy Froning McCoy Froning
108	2 to 5	L., M., W., at 9 M., W., at 2 Lab., M., W., 8 to 11 M., W., 1 to 4 M., 1 to 4; Sat., 8 to 11	V. L. 101 V. L. 101 V. L. 201, 205 V. L. 201, 205 V. L. 201, 205	Morrey Morrey McCoy Froning McCoy Froning McCoy Froning
110	2 to 5	L., Tu., Th., at 9 Lab., to be arranged	V. L. 102	Morrey Morrey McCoy
112	2 to 5	L., Tu., Th., at 10 Lab., to be arranged	V. L. 102	Morrey Morrey McCoy
114	2 to 5	L., M., W., at 10 Lab., to be arranged	V. L. 102	Morrey Morrey McCoy
116	2 to 5	L., M., W., at 8 Lab., to be arranged	V. L. 102	Froning Froning
117	2 to 5	L., W., at 11; F., at 1 Lab., M., 1 to 4; F., 2 to 5	V. L. 102 V. L. 8	Starin Starin
118	2 to 5	L., M., at 2; F., at 1	V. L. 102	Starin

BACTERIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., W., 1 to 4; F., 2 to 5	V. L. 8	Starin
119-120	2 to 5	L., M., F., at 11	V. L. 102	Starin
		Lab., to be arranged		Starin
121-122	2 to 5	To be arranged		Morrey
123-124	2 to 5	To be arranged		Morrey
125-126	3 to 5	To be arranged		Morrey, Starin, Froning, McCoy
131	4	L., M., F., at 10	V. L. 102	Morrey
		Lab., W., Sat., 8 to 11	V. L. 8	Starin
132	4	L., M., Th., at 9	V. L. 102, 101	Starin
		Lab., W., F., 8 to 11	V. L. 8	Starin

BIBLICAL LITERATURE

103-104	3	M., Tu., Th., at 10	O. 2	Breyfogle
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BIBLIOGRAPHY

101-102	1	To be arranged	Li.	Jones
103	½	Tu., at 9	Li. 107	Reeder
		Th., at 3	Li. 107	Reeder
105-106	1	W., at 4	Li. 107	Reeder

BOTANY

101-102	4	L., Tu., at 9	B. Z. 100	Schaffner
		Tu., at 2	B. Z. 100	Detmers
		Th., at 9	B. Z. 100	Stover
		Th., at 2	B. Z. 100	Griggs
		Quiz., Tu., Th., at 8	B. Z. 208	Stover
			B. Z. 110	Detmers
		Tu., Th., at 10	B. Z. 208	Stover
			B. Z. 110	Detmers
			B. Z. 100	Sears
		Tu., Th., at 1	B. Z. 208	Griggs
			B. Z. 110	Detmers
			B. Z. 100	Sears
		Tu., Th., at 3	B. Z. 208	Griggs
			B. Z. 110	Detmers
			B. Z. 100	Sears
		Lab., M., 8 to 11	B. Z. 108	Detmers
		M., 1 to 4	B. Z. 108	Stover
		Tu., 8 to 11	B. Z. 108	
		Tu., 1 to 4	B. Z. 108	
		Th., 8 to 11	B. Z. 108	

BOTANY—Continued

Course No.	Hours	Time	Room	Instructor
		Th., 1 to 4	B. Z. 108	
		F., 8 to 11	B. Z. 108	Detmers
			B. Z. 62	Sears
		F., 1 to 4	B. Z. 108	Detmers
			B. Z. 62	Sears
107	2	To be arranged	B. Z. 108	Detmers
110	2	W., 1 to 4	B. Z. 108, 110	Sears
113-116	3	L., W., at 11	B. Z. 208	Stover
		Lab., M., F., 10 to 12	B. Z. 206	
117-118	3	L., Tu., at 9	B. Z. 110	Transeau
		Lab., W., 1 to 5	B. Z. 66	
120	3	Sat. and Mon. arranged	B. Z. 210	Griggs
121	3	L., W., at 1	B. Z. 110	Schaffner
		Lab., W., 2 to 4	B. Z. 62	
123-124	3 to 5	M., W., 8 to 12	B. Z. 210	Griggs
125-126	4	L., Tu., Th., at 8	B. Z. 100	Transeau
		Lab., Tu., Th., 1 to 3	B. Z. 112	
		Tu., Th., 3 to 5	B. Z. 112	
127-128	4	Tu., Th., 8 to 11	B. Z. 210	Griggs
129-130	3 to 5	M., 1 to 4; other hours arranged	B. Z. 60	Schaffner
131-132	3 to 5	To be arranged	B. Z. 60	Schaffner
133-134	3 to 5	To be arranged		Schaffner, Transeau, Griggs, Stover
135-136	1	Tu., at 4	B. Z. 110	Schaffner
137-138	1	M., at 4	B. Z. 110	Schaffner
139-140	3 to 5	To be arranged	B. Z. 210	Griggs
142	2	Th., 1 to 4	B. Z. 62	Schaffner
145-146	2	Tu., at 8; M., 1 to 3	B. Z. 62	Brown
150	3	M., at 9; W., 9 to 11	B. Z. 110, 112	Transeau
201-202	3 to 10	To be arranged	B. Z. 104	Schaffner
				Griggs
203-204	4 to 10	To be arranged	B. Z. 104	Schaffner
				Griggs
205-206	4 to 10	To be arranged	B. Z. 112	Transeau
207-208	3 to 10	To be arranged	B. Z. 210	Griggs

CHEMISTRY

105-106	4	L., M., at 8	Ch. 200	Evans and
		W., at 9	Ch. 200	Dept. Assistants
		M., at 1	Ch. 200	
		W., at 2	Ch. 200	

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
		Q., W., at 8	Ch. 300, 302	
		F., at 8	Ch. 302, 300	
		F., at 9	Ch. 207, 101, 302	
		W., at 1	Ch. 101, 302, 300	
		F., at 1	Ch. 300, 101 302	
		F., at 2	Ch. 101, 207, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		
105	4	To be arranged		
109-110	4	L., F., at 10	Ch. 200	Evans and Department Assistants
		F., at 3	Ch. 200	
		Q., M., at 10	Ch. 207, 300	
		M., at 3	Ch. 207, 101, 302	
		W., at 10	Ch. 101, 207,	
		W., at 3	Ch. 101, 207, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		
109	4	To be arranged		
113-114	2	Tu., Th., at 1	Ch. 200	Henderson
117	3	To be arranged		
119-129	4	L., F., at 10	Ch. 207	Foulk
		L., M., at 3	Ch. 200	Foulk
		Lab. open mornings and afternoons		
121	4	L., F., at 10	Ch. 207	Foulk
		Lab., Tu., W., 1 to 4		
124	1	Th., at 3	Ch. 200	Foulk
127	4	M., Tu., W., F., at 11	Ch. 200	McPherson
131-132	2	To be arranged		
136	2	Tu., F., at 11	Ch. 207	Foulk
150	3	Tu., Th., at 9; Th., at 1 (Vet.)	Ch. 101	Boord
	5	Tu., Th., at 9; Th., at 1; Lab. arranged (Pharm.)		
151-152	2	Tu., Th., at 8	Ch. 200	McPherson

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
153-154	2 or 3	Laboratory open in after- noons		McPherson
157-158	3	M., W., F., at 8	Ch. 207	Henderson
161-161	2 or 3	Laboratory open daily 8 to 12 and 1 to 4		Henderson
165	2	M., W., at 11	Ch. 207	Foulk
167	3 to 5	To be arranged		
168	3 to 5	L., Tu., at 9	Ch. 207	Shipley
		Lab., to be arranged		
169	3 to 5	To be arranged		
176	3	M., W., at 11	Ch. 207	Foulk
177	2	Tu., Th., at 8	Ch. 207	Withrow
178	1	Tu., at 8	Ch. 207	Withrow
182		Inspection trip		
184		Report		
185	2	W., Th., 1 to 4	Ch. 207	Withrow
186	3	W., Th., F., 1 to 4	Ch. 207	Withrow
187-187	2 or 3	Laboratory open in after- noons		Henderson
192	2	Tu., Th., at 8	Ch. 101	Henderson
194	2	To be arranged		
196	2	To be arranged		
201-202	3	To be arranged		
205-206	3 to 5	To be arranged		
209-210	3	To be arranged		
213	2	Tu., Th., at 8	Ch. 101	Henderson
215-216	2	Tu., 4 to 6	Ch. 101	Boord
225	2	To be arranged		
227	2	Tu., F., at 11	Ch. 207	Foulk
235-236	5 to 10	To be arranged		

COMPARATIVE LITERATURE

111-112	1	M., at 3	U. 306	Elden
175	2	Tu., Th., at 1 (German)	U. 411	Barrows
191-192	2	M., W., at 11	L. 107	Lewisohn
193-194	2	Tu., Th., at 8	U. 306	Peirce
195	2	Tu., F., at 4	U. 306	Bolling
197	2	Tu., Th., at 8	U. 321	Barrows
214	2	F., 4 to 6	L. 308	Barrows

DAIRYING

101	4	M., W., F., at 10	T. 200	Erf
		Lab., Tu., 1 to 4	T. 3, 5, 10	
		W., 1 to 4		

DAIRYING—Continued

Course No.	Hours	Time	Room	Instructor
		Th., 1 to 4		
		F., 1 to 4		
101	4	M., W., F., at 2	T. 200	Erf
		Lab., M., 8 to 11	T. 3, 5, 10	
		Tu., 8 to 11		
		W., 8 to 11		
		F., 8 to 11		

ECONOMICS AND SOCIOLOGY**Economics**

131-133	3	M., W., F., at 3	P. 9	Huntington
135-136	3	M., W., F., at 8	P. 12	Ruggles
		M., W., F., at 8	P. 13	
		M., W., F., at 8	P. 9	
		M., W., F., at 9	P. 12	Lockhart
		M., W., F., at 9	P. 13	Drury
		M., W., F., at 9	P. 9	
		M., W., F., at 10	P. 12	Hammond
		M., W., F., at 10	P. 13	Drury
		M., W., F., at 10	P. 9	
		M., W., F., at 1	P. 12	
		M., W., F., at 1	P. 13	Drury
		M., W., F., at 2	P. 12	Parry
		M., W., F., at 2	P. 13	Drury
		M., W., F., at 2	P. 9	
		M., W., F., at 3	P. 12	
		M., W., F., at 3	P. 13	
		M., W., F., at 4	P. 12	
136-135	3	M., W., F., at 3	P. 6	Walradt
139	3	Tu., Th., at 9	P. 10	Huntington
				Harris
		Tu., Th., at 10	P. 10	Huntington
				Harris
		Tu., Th., at 1	P. 10	Huntington
				Harris
		Tu., Th., at 2	P. 10	Huntington
				Harris
		Lab., M., 8 to 10	P. 11	Huntington
				Harris
		W., 8 to 10	P. 11	Huntington
				Harris
		M., 1 to 3	P. 11	Huntington
				Harris
		W., 1 to 3	P. 11	Huntington
				Harris
141-144	2	Tu., Th., at 10	P. 9	Lockhart

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
145-146	2	To be arranged		Ruggles
147-148	2	Tu., Th., at 9	P. 12	Walradt
149-150	3	M., W., F., at 1	P. 9	Walradt
153-154	3	M., W., F., at 8	P. 7	Lockhart
157-158	2	Tu., Th., at 9	P. 13	Ruggles
159	3	M., W., F., at 2	P. 6	Huntington
160-162	3	M., W., F., at 1	P. 6	Parry
163	3	M., W., F., at 9	P. 7	Hammond
165-166	3	M., W., F., at 3	P. 7	Hammond
167	3	M., W., F., at 2	P. 7	Ruggles
169-170	2	To be arranged		
171	3	Tu., Th., at 9	P. 10	Huntington
		Tu., Th., at 10	P. 10	Harris
		Tu., Th., at 1	P. 10	Huntington
		Tu., Th., at 2	P. 10	Harris
		Lab., M., 8 to 10	P. 11	Harris
		W., 8 to 10	P. 11	Harris
		M., 1 to 3	P. 11	Harris
		W., 1 to 3	P. 11	Harris
172	3	M., W., F., at 2	P. 109	Harris
173	3	M., W., F., at 10	P. 109	Huntington
174	3	M., W., F., at 2	P. 109	Harris
175	3	M., W., F., at 3	P. 109	Parry
177-178	2	Tu., at 2	P. 11	Mark
		Tu., at 3	P. 11	Mark
		Lab., Th., 1 to 3	P. 11	
		Th., 3 to 5	P. 11	
180-179	2	Tu., Th., at 9	P. 9	Lockhart
181-182	3	M., W., F., at 9	P. 6	Walradt
183	3	M., W., F., at 9	P. 7	Hammond
184	3	M., W., F., at 2	P. 6	Huntington
185-186	3	M., W., F., at 10	P. 7	Hagerty
188	2	Tu., Th., at 8	P. 109	Ruggles
189-190	2	Tu., Th., at 8	P. 6	Harris
203-204	3	M., W., F., at 11	L. 305	Parry
207-208	2	Tu., 4 to 6	L. 305	
209-210	1 to 3	To be arranged		
211-212	1 to 3	To be arranged		

ECONOMICS AND SOCIOLOGY—Continued

Sociology

Course No.	Hours	Time	Room	Instructor
101-102	3	M., W., F., at 8	P. 6	Burgess
		M., W., F., at 8	P. 10	
		M., W., F., at 9	Ha. 101	Bruder
		M., W., F., at 9	Ha. 200	
		M., W., F., at 10	P. 6	
		M., W., F., at 10	Ha. 208	Bruder
		M., W., F., at 1	P. 7	Mark
		M., W., F., at 2	P. 10	Mark
		M., W., F., at 2	Ha. 200	
		M., W., F., at 3	P. 10	McKenzie
		M., W., F., at 4	P. 9	
102-101	3	M., W., F., at 3	Ha. 200	
104	3	M., W., F., at 3	O. 5	Bruder
105	3	M., W., F., at 3	P. 109	Bruder
107	3	M., W., F., at 2	O. 2	McKenzie
108	1	Tu., at 8	Arch. M.	Mills
109	4	M., W., F., at 9	P. 109	Hagerty
		Lab., S., 9 to 12		
112	4	M., W., F., at 9	P. 109	Hagerty
		Lab., S., 9 to 12		
113-114	3	M., W., F., at 9	P. 10	Burgess
115-116	4	To be arranged		
117-118	2	Tu., 4 to 6	P. 7	Mark
120	3	M., W., F., at 2	P. 7	Mark
123-124	3	M., W., F., at 2	O. 5	Bruder
127-128	3	M., W., F., at 10	P. 10	Burgess
129-130	3	Tu., Th., at 8	P. 7	Burgess
		Field work to be arranged		
201-202	2	To be arranged		
207-208	2	To be arranged		

ENGINEERING DRAWING

101	2	M., W., 8 to 10	Br. 203, Ha. 301	All Instructors
		M., W., 1 to 3	Br. 203, 200	
		Tu., Th., 8 to 10	Ha. 301	
		Tu., Th., 1 to 3	Br. 203, 200	
		F., Sat., 8 to 10	Br. 104, Ha. 301	
101	2	To be arranged		
102	3	To be arranged		
102	3	L., M., at 2	Br. 203, 1	All Instructors
		M., at 9	Br. 203	

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
		W., at 10	Br. 203, 200	
		W., at 3	Br. 203	
		F., at 8	Br. 203, 200	
		F., at 10	Br. 200, 104	
		F., at 1	Br. 203, 200	
		F., at 2	Br. 104, 200, 1	
		F., at 3	Br. 203	
		Lab., M., W., 8 to 10	Br.	
		M., W., 1 to 3	Br.	
		Tu., Th., 8 to 10	Br.	
		Tu., Th., 1 to 3	Br.	
		F., Sat., 8 to 10	Br.	
103	3	L., M., W., at 2	Br. 1, 12	All Instructors
		Tu., Th., at 8	Br. 203	
		Tu., Th., at 9	Br. 203, 200	
		Tu., Th., at 10	Br. 203	
		Tu., Th., at 3	Br. 203, 200	
		Lab., M., 1 to 3	Br.	
		Tu., 1 to 3	Br.	
		W., 1 to 3	Br.	
		Th., 8 to 10	Br.	
		F., 8 to 10	Br.	
		F., 1 to 3	Br.	
104	3	L., M., at 2	Br. 104	Williams
		Tu., at 8	Br. 203	Svensen
		Tu., at 9	Br. 203	Gilbert
		Tu., at 3	Br. 203	Withrow
				Inagaky
		Lab., M., Tu., 1 to 3	Ha.	
		W., Th., 8 to 10	Ha.	
		Th., F., 1 to 3	Ha.	
		F., 1 to 3; Sat., 8 to 10	Ha.	
105	3	L., M., W., at 10	Br. 203	Turnbull
		M., W., at 2	Br. 203	Turnbull
		Lab., Tu., 8 to 10	Br.	
		Th., 1 to 3	Br.	
106	3	L., M., W., at 10	Br. 12	Turnbull
		M., W., at 2	Br. 12	Turnbull
		Lab., Tu., 8 to 10	Br.	
		Th., 1 to 3	Br.	
107	3	L., Tu., Th., at 2	Br. 203	Meiklejohn
		Lab., Tu., 8 to 10	Br.	
		Sat., 8 to 10	Br.	

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
108	3	Tu., Th., at 8; Th., 1 to 4	Br. 200	Meiklejohn
110	2	M., Tu., 8 to 10	Ha. 301	Williams, Svensen, Gilbert
111	2	W., Th., 1 to 3 M., Tu., 8 to 10	Ha. 301 Br.	Williams Svensen
113	4	M., Tu., 1 to 3 Th., F., 1 to 3 M., F., 1 to 4	Br. Br. Br. 203	Svensen
114	3	Th., F., 1 to 4	Br. 203	Svensen
121-122	2	M., Tu., 1 to 3	Br. 12, 203	Svensen
125-125	2	L., Tu., at 1 Th., at 9 Th., at 1 F., at 10 Lab., W., 8 to 11 W., 1 to 4 F., 8 to 11 F., 1 to 4	Ha. 301 Br. 1 Br. 1, 104, 2nd sem. Br. 203 Br. Br. Br. Br.	French Meiklejohn Withrow Inagaky
127	1½	Sat., 8 to 11	Br. 203	French Sheets Turnbull
128	1½	Sat., 8 to 11	Br. 203	French
129	1	Sat., 8 to 10	Br.	Sheets
130	2	Sat., 8 to 12	Br.	Sheets
131-132	3	M., W., 1 to 4	Br. 200	French

ENGLISH

101-104	2	M., W., at 10 M., W., at 2 Tu., Th., at 8 Tu., Th., at 9 Tu., Th., at 10 Tu., Th., at 1 Tu., Th., at 2 Tu., Th., at 3	Ph. 302 Ph. 304 Ph. 202, 104, 302, P. 10 Ph. 202, 104 Ha. 200, P. 109 Ph. 302 Ha. 100, P. 6 Ph. 202, 104, P. 109 Ph. 202, 104 302, P. 109 Ph. 202, 104, 302, 204	
104-101	2	Tu., Th., at 8 Tu., Th., at 1 Tu., Th., at 4	Ph. 102 Ph. 102 Ph. 102	
105-106	2	Tu., Th., at 10	Ph. 104	Beck

ENGLISH—Continued

Course No.	Hours	Time	Room	Instructor
107-108	2	Tu., Th., at 10	Ph. 202	Graves
109-110	2	Tu., Th., at 2	Ph. 102	Percival
111-112	3	M., at 3; W., 3 to 5	Ph. 304	Ketcham
121-122	2	M., F., at 8	Ph. 304	Lindsley
		Tu., Th., at 8	Ph. 304	Lindsley
		M., F., at 10	Ph. 304	Lindsley
		Tu., Th., at 10	Ph. 304	Ketcham
		Tu., Th., at 1	Ph. 304	Ketcham
		Tu., Th., at 1	Ph. 302	Lindsley
		Tu., Th., at 2	Ph. 304	Ketcham
124	2	Tu., Th., at 9	Ph. 302	Lindsley
125-126	2	Tu., Th., at 9	Ph. 304	Ketcham
		Tu., Th., at 3	Ph. 304	Ketcham
127-128	2	Tu., Th., at 10	Ph. 204	McKnight
131-133	3	M., W., F., at 8	Ph. 102	Taylor
		M., W., F., at 9	Ph. 302	Beck
		M., W., F., at 2	Ph. 104	Cooper
		M., W., F., at 3	Ph. 104	Percival
		M., W., F., at 4	Ph. 104	Wiley
133-131	3	M., W., F., at 8	Ph. 204	Graves
		M., W., F., at 9	Ph. 104	Cooper
		M., W., F., at 2	Ph. 302	Craig
		M., W., F., at 3	Ph. 302	Andrews
136	3	M., W., F., at 1	Ph. 104	Percival
137	3	M., W., F., at 1	Ph. 104	Percival
141-142	3	M., W., F., at 9	Ph. 102	Taylor
143-144	3	M., W., F., at 2	Ph. 102	Andrews
145-146	2	Tu., Th., at 10	Ph. 102	Denney
151-152	3	M., W., F., at 1	Ph. 204	McKnight
154-153	3	M., W., F., at 2	Ph. 204	McKnight
155-156	3	M., W., F., at 3	Ph. 102	Taylor
157-158	3	M., W., F., at 9	Ph. 204	Graves
159	3	M., W., F., at 1	Ph. 302	Andrews
165-166	3	M., W., F., at 2	Ph. 204	McKnight
167-168	3	M., W., F., at 10	Ph. 102	Denney
169-170	3	M., W., F., at 10	Ph. 204	Cooper
181	2	Tu., Th., at 9	Ph. 102	Denney
201-202	2	W., 4 to 6	L. 105	Graves
204	2	To be arranged		Denney
205-206	2	M., 4 to 6	L. 104	Denney
207-208	2	Tu., 4 to 6	L. 104	Taylor
209	2	Th., 4 to 6	L. 105	McKnight
212	2	Th., 4 to 6	L. 105	McKnight
213-214	2	Th., 4 to 6	L. 104	Cooper
215-216	2	Th., 4 to 6	Ph. 204	Andrews
217-218	2	Tu., 4 to 6	L. 105	Percival
219-220	2	W., 4 to 6	L. 104	Denney

EUROPEAN HISTORY

Course No.	Hours	Time	Room	Instructor
101-102	3	M., W., F., at 8	U. 201	All Instruc- tors
		M., W., F., at 8	U. 202	
		M., W., F., at 9	U. 201	
		M., W., F., at 10	U. 201	
		M., W., F., at 1	U. 201	
		M., W., F., at 1	U. 202	
		M., W., F., at 2	U. 201	
		M., W., F., at 3	U. 201	
		M., W., F., at 4	U. 201	
103-104	3	M., W., F., at 8	P. 109	Perkins
		M., W., F., at 3	U. 202	Harris
105-106	3	M., W., F., at 9	U. 202	McNeal
107-108	2	Tu., Th., at 10	U. 201	McNeal
109-110	2	Tu., Th., at 9	L. 304	Siebert
113-114	3	M., W., F., at 10	U. 202	Siebert
117-118	2	Tu., Th., at 10	L. 107	Siebert
121-122	2	Tu., Th., at 9	U. 201	McNeal
123-124	3	M., W., F., at 2	U. 202	
125-126	3	M., W., F., at 1	P. 109	Harris
127-128	3	M., W., F., at 4	U. 202	
152	2	M., W., at 11	L. 307	Siebert
201-202	2	To be arranged		McNeal
203-204	2 to 5	To be arranged		Siebert

FARM CROPS

101	4	M., W., F., at 3	T. 109	Stemple
		Lab., M., 8 to 10	T. 113	
		Tu., 8 to 10	T. 113	
		W., 8 to 10	T. 113	
		F., 8 to 10	T. 113	
101	4	M., W., F., at 10	T. 109	Stemple
		Lab., Tu., 1 to 3	T. 113	
		W., 1 to 3	T. 113	
		Th., 1 to 3	T. 113	
		F., 1 to 3	T. 113	

FORESTRY

101	2	Tu., Th., at 8	H. F. 108	Lazenby
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GEOLOGY

101-102	3	M., W., F., at 8	O. 5	Hills
		M., W., F., at 9	O. 5	Hills
		M., W., F., at 1	O. 105	Bownocker
		M., W., F., at 2	O. 105	Cottingham
103	3	M., W., F., at 10	O. 105	Bownocker
104	3	M., W., F., at 10	O. 105	Prosser
105	3 to 5	To be arranged; field trips Saturday		Prosser

GEOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
106	3	To be arranged; field trips Saturday		Hills
107-108	2 to 5	To be arranged		
111	3	Tu., Th., 8 to 11 and 1 to 5	O. 5	
113-114	2 to 5	To be arranged		
116	3	To be arranged		
141-142	2 to 5	To be arranged		
151-151	Agr. 3	L., Tu., Th., at 8	O. 105, 2nd sem. 5	Verwiebe
		Tu., Th., at 9	O. 105	Mark
		Tu., Th., at 10	O. 5, 2nd sem. 105	Mark
		Tu., Th., at 1	O. 105, 2nd sem. 5	Verwiebe
		Tu., Th., at 2	O. 105	Verwiebe
		Tu., Th., at 3	O. 105	Cottingham
		Lab., W., at 8	O. 204	Verwiebe
		W., at 9	O. 204	Cottingham
		W., at 1	O. 204	Verwiebe
		W., at 2	O. 204	Cottingham
		F., at 8	O. 204	Verwiebe
		F., at 9	O. 204	Cottingham
		F., at 1	O. 204	Verwiebe
		F., at 2	O. 204	Verwiebe
162	4	M., W., F., at 9	O. 202	
164	3	M., W., F., at 10	O. 202	
165	3	Tu., Th., at 10	O. 105	Prosser
		Lab., F., at 10	O. 204	Verwiebe
		W., at 10	O. 204	Verwiebe
166	2	Tu., at 9; W., 2 to 4	O. 202	Bownocker
167	3	M., W., F., at 8	O. 105	Bownocker
168	3	L., Tu., Th., at 8	O. 105	Prosser
		Tu., Th., at 1	O. 105	Prosser
		Lab., W., at 10	O. 204	Verwiebe
		M., at 1	O. 204	Verwiebe
175-176	2	M., W., at 4	O. 5	Hills
201-202	3 to 5	To be arranged		
203-204	3 to 5	To be arranged		

GERMAN

101-102	4	M., Tu., W., Th., at 8	U. 320	Keidel, Reese
		M., Tu., W., Th., at 8	H. F. 106	Rey
		M., Tu., W., Th., at 9	U. 320	Eisenlohr
		M., Tu., W., Th., at 10	U. 320	Barrows
		M., Tu., W., Th., at 1	U. 320	Kotz

GERMAN—Continued

Course No.	Hours	Time		Room	Instructor
		M., Tu., W., Th., at 2	U. 320		
		M., Tu., W., Th., at 3	U. 320		Thomas, Lewisohn
101	4	M., Tu., W., Th., at 4	H. F. 106		Reese
102-103	4	M., Tu., W., Th., at 4	U. 320		Busey
103-104	4	M., Tu., W., Th., at 8	U. 319		Eisenlohr
		M., Tu., W., Th., at 9	U. 319		Barrows
		M., Tu., W., Th., at 9	U. 412		Busey
		M., Tu., W., Th., at 10	U. 319		Evans
		M., Tu., W., Th., at 1	U. 319		Thomas
		M., Tu., W., Th., at 2	U. 319		Thomas
		M., Tu., W., Th., at 3	H. F. 107		Keidel
103-106	4	M., Tu., W., Th., at 10	H. F. 106		Lewisohn
		M., Tu., W., Th., at 1	H. F. 106		
		M., Tu., W., Th., at 4	U. 319		Kotz
104	4	M., Tu., W., Th., at 4	H. F. 106		Reese
107-108	4	M., Tu., W., Th., at 10	U. 412		Busey
		M., Tu., W., Th., at 3	H. F. 106		Kotz
115-116	3	M., W., F., at 9	U. 311		Keidel
		M., W., F., at 2	H. F. 106		Kotz
117-118	2	Tu., Th., at 10	H. F. 204		Thomas
119-120	2	Tu., Th., at 9	H. F. 205		Lewisohn
		Tu., Th., at 2	H. F. 106		Keidel
131-132	2	M., W., at 11	U. 320		Barrows
		Tu., Th., at 3	H. F. 205		Reese
133-134	2	M., Tu., W., Th., at 8	L. 308		Reese Keidel
153-154	3	M., W., F., at 3	U. 319		Evans
157-158	2	Tu., Th., at 10	U. 209		Eisenlohr
159-160	2	Tu., Th., at 9	U. 202		Reese
163-164	2	W., 4 to 6	U. 321		Lewisohn
171-172	2	Tu., Th., at 2	U. 202		Eisenlohr
173	2	M., 4 to 6	L. 308		Evans
175	2	Tu., Th., at 1	U. 411		Barrows
176	2	Tu., Th., at 1	H. F. 205		Keidel
177-178	2	Tu., Th., at 8	U. 412		Busey
201-202	2	Tu., 4 to 6	L. 308		Eisenlohr
203-204	2	M., W., at 11	U. 319		Thomas
207-208	2	Th., 4 to 6	L. 308		Lewisohn
212	2	M., 4 to 6	L. 308		Evans
214	2	F., 4 to 6	L. 308		Barrows
215-216	2	W., 4 to 6	L. 308		Evans

GREEK LANGUAGE AND LITERATURE

101-102	4	M., T., W., Th., at 1	U. 306	Bolling
107-108	3	To be arranged		
109-110	2	To be arranged		

GREEK LANGUAGE AND LITERATURE—Continued

Course No.	Hours	Time	Room	Instructor
111-112	2	To be arranged		
113-114	2	To be arranged		
115-116	2	Tu., Th., at 3	U. 306	Bolling
119-120	2	To be arranged		
121-122	2 to 4	To be arranged		
123-124	2	M., W., at 4	U. 306	Bolling
125-126	4	M., Tu., W., Th., at 2	U. 306	

HISTORY AND PHILOSOPHY OF EDUCATION

101-102	3	M., W., F., at 10	Ha. 101	Anderson
		M., W., F., at 4	Ha. 101	Anderson
103-104	2	Tu., Th., at 10	Ha. 101	Anderson
105-106	2	Tu., Th., at 9	Ha. 101	Anderson
107-108	2	M., W., at 3	Ha. 101	Anderson
109-110	2	Tu., Th., at 3	Ha. 101	Anderson
112	2	Tu., Th., at 2	Ha. 101	Anderson
121-122	2	Tu., 4 to 6	L. 309	Anderson
123-124	2	To be arranged		Anderson
126	1	M., at 9	L. 309	Anderson

HOME ECONOMICS

101-102	5	L., M., W., at 9	H. E. 103	White
		M., W., at 2	H. E. 2	White
		Q., F., at 8	H. E. 2	White
		F., at 10	H. E. 221	White
		F., at 1	H. E. 2	White
		F., at 3	H. E. 2	White
		Lab., M., W., 1 to 3;	H. E. 1, 2, 3,	
		2nd sem. Tu., Th., 3 to 5	4	
		M., W., 9 to 11; 2nd sem.		
		Tu., F., 10 to 12		
		Tu., Th., 8 to 10		
		Tu., Th., 1 to 3		
104	3	M., W., F., at 10	H. E. 103	
104	3	M., W., F., at 10	H. E. 103	
		M., W., F., at 2	H. E. 103	
105-106	2 to 5	Th., at 2	H. E. 221	Van Meter
		Lab. to be arranged	H. E. 201,	
			202	
108	2	Tu., Th., at 9	H. E. 2	Hathaway
110	4	Tu., Th., at 8	H. E. 103	Skinner
		Lab., M., W., 11 to 1	H. E. 104, 103	
110	4	Tu., Th., at 8	H. E. 103	Skinner
		Tu., Th., at 1	H. E. 103	Skinner
		Lab., Tu., F., 10 to 12	H. E. 104, 118	
		M., W., 11 to 1	H. E. 104, 103	

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
111-112	2	L., M., at 9	H.E. 118,221	Walker
		M., at 2	H.E. 118,221	Tucker
		Tu., at 8	H.E. 118,221	Walker
		Tu., at 2	H.E. 118,221	Walker
		Th., at 9	H.E. 118,221	Walker
		Th., at 1	H.E. 118,221	Walker
		Lab., Tu., 9 to 11	H.E. 115,116	
			117	
		W., 8 to 10		
		W., 1 to 3		
		Th., 2 to 4		
		F., 8 to 10		
		F., 1 to 3		
113	3	L., W., at 11	H. E. 2	Hathaway
		Th., at 10	H. E. 2	Hathaway
		Lab., Tu., F., 10 to 12	H. E. 13, 14	
		Tu., Th., 1 to 3		
		M., W., 1 to 3		
113	3	L., W., at 11	H. E. 2	Hathaway
		Tu., F., 10 to 12	H. E. 13, 14	
116	3	Th., at 10;	H. E. 2	
		{ M., W., 1 to 3	H. E. 13	Hathaway
		{ M., W., 8 to 10	H. E. 13, 14	
118-118	3	L., Th., at 10; Tu., 10 to 12; F., 1 to 3	H. E. 118	Tucker
			111	
		F., at 9; Tu., Th., 3 to 5	H. E. 118,	Tucker
			111	
119	3	M., W., Fri., at 11	H. E. 118	Walker
		M., W., F., at 3	H. E. 118	Walker
119	3	M., W., F., at 11	H. E. 118	Walker
121	3	M., at 10	H. E. 118	White
		Lab., Tu., Th., 8 to 10	H. E. 202	
		M., W., 2 to 4	H. E. 202	
123-124	2	Tu., at 2; Lab. to be arranged	H. E. 103	Adams
201-202	2 to 5	To be arranged		White

HORTICULTURE

101	4	M., W., F., at 10	H. F. 113	Davis
		Lab., Tu., 1 to 3		
		Th., 1 to 3		
156	2	M., W., at 8	H. F. 204	Elwood

JOURNALISM

101-102	3	M., at 9	S.	Myers
		M., at 1	S.	Myers
		Lab. to be arranged		

JOURNALISM—Continued

Course No.	Hours	Time	Room	Instructor
105-106	3	Wed. at 11; Lab. to be arranged	S.	Myers
109-110	2	Tu., at 11; Lab. to be arranged	S.	Myers
111-112	3	M., W., F., at 8	S.	Myers
113-114	2	Tu., Th., at 8	S.	Myers
115-116	2	Tu., Th., at 1	S.	Myers
117-118	3	M., W., F., at 10	S.	Myers

LATIN

101-102	4	M., Tu., W., Th., at 9	U. 306	Hodgman
	4	M., Tu., W., Th., at 10	U. 316	Elden
	4	M., Tu., W., Th., at 3	U. 316	Dunlap
103-104	3	M., W., F., at 10	U. 306	Hodgman
	3	M., W., F., at 2	U. 316	Elden
105-106	2	Tu., Th., at 9	U. 316	Elden
107-108	1	W., at 3	U. 306	Derby
109-110	1 or 2	F., at 3	U. 306	Derby
111-112	1	M., at 3	U. 306	Elden
113-114	3	M., W., F., at 9	U. 316	Elden
115-116	3	M., W., F., at 11	U. 316	Hodgman
119-120	1 or 2	W., at 4	U. 316	Hodgman
121-122	2 to 5	Tu., Th., at 4	U. 316	Derby
123-124	1	Tu., at 11	U. 316	Hodgman
125-126	1	W., at 3	U. 308	Elden
127-128	1 or 2	Tu., Th., at 2	U. 316	Derby
129	2	Tu., Th., at 10	U. 306	Hodgman
147-148	4	M., Tu., W., Th., at 10	U. 308	Dunlap
149-150	4	M., Tu., W., Th., at 2	U. 308	Dunlap
201-202	1	M., at 4	U. 316	Hodgman
203-204	1	F., at 3	U. 316	Elden
211-212	1	F., at 3	U. 308	Dunlap
213-214	2 or 3	M., Tu., Th., at 3	U. 308	Derby

MANUAL TRAINING

111-112	3	Tu., Th., at 4; 1 hour arranged	S.	Usry
117-118	2	Tu., at 11; lab. to be arranged	S.	Usry
121-122	2	L., M., at 4	S.	Usry
		Lab., M., 1 to 3	S.	Usry
		M., 2 to 4	S.	Usry
		Tu., 9 to 11	S.	Usry
123-123	2	Tu., Th., at 4; 1 hour arranged	S.	Usry

MATHEMATICS

Course No.	Hours	Time	Room	Instructor
101-102	5	Daily at 10	Lo. 231	Minor
107-107	3	M., W., F., at 8	U. 310	
		M., W., F., at 9	U. 310	
		M., W., F., at 10	U. 313	
		M., W., F., at 1	H. F. 108	
		M., W., F., at 2	U. 310	
113-114	5	M., W., F., at 3	H. F. 108	All instructors
		Daily at 8	U. 311	
121-122	3	L., Tu., Th., at 8	U. 310	
		Tu., Th., at 9	U. 310	
		Tu., Th., at 1	U. 310	
		Tu., Th., at 2	U. 310	
		Lab., Tu., 8 to 10	U. 313	
		F., 8 to 10	U. 313	
		W., 1 to 3	U. 312	
		F., 1 to 3	U. 313	
122-121	3	L., Tu., Th. at 2	U. 312	
		Lab., F., 2 to 4	U. 312	
125-126	2	Tu., 3 to 5	U. 312	
127-128	3	M., W., F., at 1	U. 310	
129-130	3	Tu., Th., at 10	U. 313	
		Lab., Tu., 2 to 4	U. 313	
		W., 2 to 4	U. 313	
		Th., 2 to 4	U. 313	
		Daily at 8	U. 308, 312	
131-132	5	Daily at 9	U. 308, 312	All instructors
		Daily at 10	U. 310, 312	
		Daily at 1	U. 308, 311	
		Daily at 2	U. 311, H. F. 108	
		Daily at 3	U. 310, H. F. 112	
132-131	5	Daily at 10	U. 311	
		Daily at 3	U. 311	
141-142	5	Daily at 8	U. 309	All instructors
		Daily at 9	U. 309	
		Daily at 10	U. 309	
		Daily at 1	U. 309	
		Daily at 2	Lo. 231	
		Daily at 3	U. 309	
142-141	5	Daily at 9	Ph. 303	Bohannon Kuhn West
		Daily at 2	Lo. 107	
151	1	W., at 10	Lo. 107	
163-164	3	To be arranged		
167-168	3	M., W., F., at 11	U. 308	
173-174	3	M., W., F., at 11	U. 309	
181	3	M., W., F., at 10	P. 11	

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
183-184	2	Tu., Th., at 1	U. 312	West
185-186	2	Tu., Th., at 2	U. 309	Arnold
187	3	M., W., F., at 2	U. 309	
189	3	M., W., F., at 10	P. 11	West
190	2	Tu., Th., at 2		West
201-202	3	To be arranged		Rasor
203-204	3	To be arranged		Swartzel
205-206	3	To be arranged		Bohannan
207	3	To be arranged		Arnold
209-210		To be arranged		West
211-212		To be arranged		Kuhn
213-214		To be arranged		Rasor
215-216		To be arranged		
217-218		To be arranged		Swartzel
219-220		To be arranged		
221-222		To be arranged		Kuhn

MECHANICS

101-102	5	Daily at 8	Lo. 232, 231	Boyd, Coddington
		Daily at 9	Lo. 232, 231	Boyd, Coddington
		Daily at 10	Lo. 232	Boyd
		Daily at 1	Lo. 232, 231	Boyd, Coddington
		Daily at 2	Lo. 232	Boyd
104	2	Tu., Th., at 8	Lo. 232	Boyd
105-106	3	To be arranged		
201-202	3	To be arranged		

MILITARY SCIENCE AND TACTICS

1-1	1	M., Tu., W. F., at 11	Ha.	Converse, Thorpe
2-2	1	M., Tu., W., at 11	Ha.	Converse, Thorpe

MINERALOGY

102	3	M., W., F., at 8	Lo. 107	McCaughey
102	3	M., W., F., at 8	Lo. 107	McCaughey
		M., W., F., at 9	Lo. 107	McCaughey
104	3	Th., F., 1 to 4	Lo. 107	McCaughey
117-118	3	To be arranged	Lo.	McCaughey
121	3	To be arranged	Lo.	McCaughey
123	3	To be arranged	Lo.	McCaughey
124	3	To be arranged	Lo.	McCaughey
126	3	To be arranged	Lo.	McCaughey

PHILOSOPHY

Course No.	Hours	Time	Room	Instructor
101-102	3	M., W., F., at 9	U. 321	Leighton, Chandler
102-101	3	M., W., F., at 8	U. 321	Chandler
		M., W., F., at 2	L. 307	Davies
105-106	3	M., W., F., at 1	L. 307	Davies
111-112	2	Tu., Th., at 2	L. 307	Davies
113-114	3	M., W., F., at 10	L. 307	Davies
115-116	2	Tu., Th., at 10	U. 321	Chandler
117	3	M., W., F., at 3	U. 321	Leighton
121-122	3	M., W., F., at 11	U. 321	Leighton
125-126	3	M., W., F., at 1	U. 321	Chandler
128	3	M., W., F., at 3	U. 321	Chandler
134	3	M., W., F., at 9	L. 307	Leighton
135-136	2	Tu., Th., at 3	L. 307	Davies
151-152	3	M., W., F., at 10	U. 321	Leighton, Chandler
		M., W., F., at 2	U. 321	
201-202	3 to 6	To be arranged		
207-208	3 to 6	To be arranged		

PHYSICAL EDUCATION

For Men

101-102	1	To be arranged	Gym.	Ohlsen,
110	2	To be arranged		Marsh
112	2	To be arranged		

For Women

131-132	1	Fri. at 11; 3 hours to be arranged	Gym.	Meyer, Hammett
133-134	1	4 hours to be arranged	Gym.	Meyer, Hammett
135	3	To be arranged	Gym.	Meyer, Hammett
136	3	To be arranged	Gym.	Meyer, Hammett

PHYSICS

101	6	Daily at 9; Sat., 8 to 11	Ph. 205, Br. 109	Jackson
103-104	4	M., W., F., at 8	Ph. 205	Earhart, Smith
		M., W., F., at 3	Ph. 205	Earhart Smith
		Lab., W., 9 to 11		
		W., 1 to 3		

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
105-106	4	Tu., Th., at 10 Tu., Th., at 3 Lab., Tu., Th., 8 to 10 Tu., Th., 1 to 3	Ph. 205 Ph. 205	
107-107	4	Tu., Th., at 8 Tu., Th., at 1 Lab., Tu., Th., 9 to 11 Tu., Th., 2 to 4	Ph. 205 Ph. 205	Smith, Heil Smith, Heil
109-109	3	M., W., F., at 8 M., W., F., at 9 M., W., F., at 10 M., W., F., at 1 M., W., F., at 2 M., W., F., at 3	Ph. 202 Ph. 202 Ph. 202 Ph. 202 Ph. 202 Ph. 202	Cole Cole Cole Cole Cole Cole
111-112	3	Tu., Th., at 9; Sat., 8 to 10 Tu., Th., at 10; Sat., 8 to 10 10 or W., 2 to 4 Tu., Th., at 2; W., 8 to 10 M., W., at 1; F., 8 to 10 M., W., at 9; W., 2 to 4 (for 112 only)	Ph. 200 Ph. 200 Ph. 200 Ph. 205 Ph. 205	All in- structors
111	3	To be arranged		Cole
113 (Mech.)	5	M., Tu., W., Th., at 8; Th., 2 to 4 M., Tu., W., Th., at 1; F., 8 to 10	Ph. 200, 204 Ph. 200, 204	All in- structors
113-114	5	(Elec.) Daily at 9 Daily at 2 (Gen.) M., Tu., W., Th., at 1; Lab. to be arranged	Ph. 200, 204 Ph. 200, 204 Ph. 200	All in- structors
115-116	2	To be arranged		
117-118	2	Tu., Th., at 1	Ph. 200	All in- structors
120	2	To be arranged		Cole
121-122	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
123-124	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
133	2	M., Tu., 8 to 10 M., Tu., 1 to 4	Ph. 100 Ph. 100	Earhart, Heil Earhart, Heil
134	3	M., at 10; M., Tu., 1 to 4 M., at 3; F., Sat., 8 to 11	Ph. 301 Ph. 301	Barnett Barnett
135	5	Tu., Th., at 1 Tu., Th., at 3	Ph. 301 Ph. 301	Barnett Barnett

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., W., Th., 8 to 11		
		F., Sat., 8 to 11		
136	4	To be arranged		
137	3 to 5	To be arranged		
138	2	Th., 1 to 5		Heil,
				Woodbury
		Sat., 8 to 12		Heil,
				Woodbury
139-140	3 to 5	To be arranged		Barnett
145-146	1	Tu., at 11	Ph. 205	Cole
147-148	3	M., W., F., at 11	Ph. 205	Earhart
169-170	2	To be arranged		Cole
201-202	3 to 5	To be arranged		
207-208	3	To be arranged		Smith
215-216	3	To be arranged		Barnett

PHYSIOLOGY

101-102	3	M., W., F., at 8	Bio. 200	
		M., W., F., at 9	Bio. 100	
		M., W., F., at 10	Bio. 100	
		M., W., F., at 1	Bio. 100	
		M., W., F., at 2	Bio. 100	
		M., W., F., at 3	Bio. 100	
104	3	Tu., Th., 8 to 11	Bio. 208	Bleile,
				Seymour
106	5	Tu., Th., F., 1 to 4	Bio. 201-8	Bleile
				Seymour
107	3	M., W., F., at 9	Bio. 200	Durrant
109-110	3	To be arranged	Bio.	Bleile
111-112	5	To be arranged	Bio.	Bleile,
				Seymour
114	3	M., F., at 9	Bio. 101	
		Lab., Tu., 1 to 4		
115	3	M., W., F., at 11	Bio. 200	Bleile
118	3	M., W., F., at 11	Bio. 200	Bleile
119-120	3	M., W., F., at 10	Bio. 200	Bleile,
				Seymour
		M., W., F., at 2	Bio. 200	Bleile,
				Seymour
201-202	3	To be arranged	Bio.	Bleile,
				Seymour
203-204	5	To be arranged	Bio.	Bleile,
				Seymour

POLITICAL SCIENCE

106	3	M., W., F., at 10	U. 200	Spencer
100	3	M., W., F., at 4	U. 200	Spencer

POLITICAL SCIENCE—Continued

Course No.	Hours	Time	Room	Instructor
113-114	2	Tu., Th., at 2	U. 200	Spencer
117-118	2	Tu., 3 to 5	U. 200	Coker
125-126	3	M., W., F., at 8	U. 200	Spencer
129	3	M., W., F., at 4	U. 200	Coker
130	3	M., W., F., at 10	U. 200	Coker
131-132	2	Tu., Th., at 9	U. 200	Coker
133-134	3	M., W., F., at 8	U. 306	Coker
		M., W., F., at 9	U. 200	Coker
				Spencer
		M., W., F., at 3	U. 200	Spencer
133	3	M., W., F., at 3	L. 307	Coker

PRINCIPLES AND PRACTICE OF EDUCATION

101	3	M., W., F., at 10	Ha. 100
		M., W., F., at 2	Ha. 101
104	3	Two consecutive hours daily; to be arranged	
105-106	3	Tu., Th., 4 to 5:30	Ha. 100
111-112	3	To be arranged	

PSYCHOLOGY

101-102	3	M., W., F., at 8	U. 400	All In-
				structors
		M., W., F., at 8	U. 401	
		M., W., F., at 8	U. 406	
		M., W., F., at 9	U. 401	
		M., W., F., at 9	U. 400	
		M., W., F., at 10	U. 400	
		M., W., F., at 10	U. 401	
		M., W., F., at 1	U. 400	
		M., W., F., at 1	U. 401	
		M., W., F., at 2	U. 400	
		M., W., F., at 2	U. 401	
		M., W., F., at 3	U. 400	
		M., W., F., at 4	U. 400	
102-101	3	M., W., F., at 3	U. 401	
103-104	2	M., W., at 9	U. 406	Arps
107-108	2	M., W., at 11	U. 406	Pintner
		Tu., Th., at 9	U. 406	Evans
		Tu., Th., at 10	U. 406	Dallenbach
		Tu., Th., at 4	U. 406	Goudge
108-107	2	Tu., Th., at 3	U. 406	
111-112	3	Tu., 1 to 4; Th., 1 to 3	U. 415	Arps, Weiss
112-111	3	Tu., 8 to 11; Th., 8 to 10	U. 415	Arps, Weiss
114	2	M., W., at 10	U. 410	Weiss
115-116	2	Tu., Th., at 10	U. 401	Evans

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
121-122	4	M., W., F., at 9; S., 9 to 12	U. 410	Bridges Pintner
124	2	Tu., Th., at 9	U. 410	Bridges
125	3	M., W., F., at 10	U. 406	Evans
128	2	Tu., Th., at 2	U. 406	Crane
129-130	2	M., W., at 1	U. 410	Arps
133-134	3	M., W., F., at 1	U. 406	Pintner
		M., W., F., at 2	U. 406	Pintner
137-138	2	F., 3 to 5	U. 410	Arps
139-140	2	To be arranged		
141-142	2 or 3	To be arranged		
147-148	1 or 2	M., 3 to 5		Pintner
		W., 3 to 5		Pintner
		F., 3 to 5		Pintner
149-150	2	Tu., Th., at 10	U. 410	Bridges
151	2	Tu., Th., at 2	U. 406	Crane
155	2	Tu., at 11	U. 406	Evans
		Lab. to be arranged		
201-202	3 or more	To be arranged		Arps, Pintner, Weiss
203-204	2	Tu., 7 to 9 P. M.	L. 307	Arps, Pintner, Weiss

ROMANCE LANGUAGES**French**

101	4	M., Tu., W., Th., at 8	U. 303	Cardon
101-102	4	M., Tu., W., Th., at 8	H. & F. 203	Haddox
		M., Tu., W., Th., at 9	H. & F. 203	Moore
		M., Tu., W., Th., at 9	H. & F. 204	Ditchy
		M., Tu., W., Th., at 10	U. 303	Bowen
		M., Tu., W., Th., at 10	U. 302	Peirce
		M., Tu., W., Th., at 1	U. 303	Cardon
		M., Tu., W., Th., at 1	U. 302	
		M., Tu., W., Th., at 2	H. & F. 204	Moore
		M., Tu., W., Th., at 2	H. & F. 203	
		M., Tu., W., Th., at 3	U. 302	
		M., Tu., W., Th., at 4	U. 301	
(for teachers only)				
101	4	M., Tu., W., Th., at 8	U. 303	Bruce
103-104	4	M., Tu., W., Th., at 8	U. 302	Chapin
		M., Tu., W., Th., at 9	U. 302	Bruce
		M., Tu., W., Th., at 1	H. & F. 203	Ditchy
		M., Tu., W., Th., at 2	U. 303	Hamilton
		M., Tu., W., Th., at 3	U. 301	Cardon

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
103	4	M., Tu., W., Th., at 10	H. & F. 203	Moore
106	4	M., Tu., W., Th., at 10	Ha. 200	Chapin
107-108	2	Tu., Th., at 9	U. 209	Cardon
		Tu., Th., at 4	U. 303	Cardon
109-110	3	M., W., F., at 9	U. 301	Peirce
		M., W., F., at 11	U. 301	Peirce
111-112	2	Tu., Th., at 10	U. 202	Bruce
115-116	2	Tu., Th., at 2	U. 205	Bowen
117-118	2	M., 3 to 5	L. 311	Bowen
119-120	2	Tu., 3 to 5	L. 311	Bowen
122	2	W., 2 to 4	L. 311	Bowen

Italian

101-102	4	M., Tu., W., Th., at 10	H. E. 221	Ditchy
103-104	2	Tu., Th., at 2	U. 201	Bruce

Spanish

101-102	4	M., Tu., W., Th., at 8	U. 301	Ingraham
		M., Tu., W., Th., at 8	H. & F. 205	Ditchy
		M., Tu., W., T., at 9	U. 303	Chapin
		M., Tu., W., T., at 9	Ha. 206	Haddox
		M., Tu., W., Th., at 10	Br. 104	Hamilton
		M., Tu., W., Th., at 10	Ha. 206	
		M., Tu., W., Th., at 1	U. 301	Moore
		M., Tu., W., Th., at 2	U. 301	Ingraham
		M., Tu., W., Th., at 2	Ha. 206	
		M., Tu., W., Th., at 3	U. 303	Hamilton
		M., Tu., W., Th., at 3	Ha. 206	
101	4	M., Tu., W., Th., at 1	Ha. 206	Studler
101	4	M., Tu., W., Th., at 1	Ha. 206	Hamilton
103-104	4	M., Tu., W., Th., at 10	U. 301	Ingraham
103	4	M., Tu., W., Th., at 2	U. 302	Chapin
105-106	2	Tu., Th., at 9	U. 301	Ingraham
110	4	M., Tu., W., Th., at 2	U. 302	Chapin
201-202	2	To be arranged		Bowen
203-204	1	To be arranged		Bowen
205-206	2	To be arranged		Bruce
207-208	3 to 10	To be arranged		Bowen
209-210	3 to 5	To be arranged		Ingraham
211-212	2	To be arranged		Ingraham

RURAL ECONOMICS

101-101	2	Tu., at 10; W., 1 to 4	Ha. 208	Phillips
110	3	M., W., F., at 9	Ha. 208	Vogt

SCHOOL ADMINISTRATION

Course No.	Hours	Time	Room	Instructor
101-102	3	M., W., F., at 9	Ha. 100	Brown
		M., W., F., at 4	Ha. 100	Brown
111-112	3	M., W., F., at 3	Ha. 100	Brown
113-114	3	M., W., F., at 2	Ha. 100	Brown
116	3	M., W., F., at 10	Ha. 100	
122	2	Tu., Th., at 10	U. Base.	
123-124	3	M., W., F., at 8	U. Base.	
127	2	Tu., Th., at 2	U. Base.	
132	2	Tu., Th., at 3	U. Base.	
201-202	2 to 5	To be arranged		Brown

SHOPWORK

101-101	2	Tu., at 8; Tu., 1 to 4	S.	Beem, Denman
		Tu., at 10; F., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Th., at 10; M., 1 to 4	S.	
		Th., at 1; Th., 8 to 11	S.	
		Th., at 3; M., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
103-103	2	Tu., at 8; Tu., 1 to 4	S.	Foust
		Tu., at 10; F., 1 to 4	S.	
		Tu., at 10; M., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Tu., at 3; M., 8 to 11	S.	
		Th., at 2; Th., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
105	2	M., at 9; M., 1 to 5	S.	Beem
		Th., at 2; Sat., 8 to 12	S.	
105	2	M., 1 to 4; Tu., 1 to 3	S.	Beem
107	2	M., 8 to 10; Tu., 8 to 11	S.	Case
		Tu., 1 to 4; W., 1 to 3	S.	
107	2	W., 1 to 4; Sat., 8 to 10	S.	Case
109-109	2	Tu., Th., 1 to 4	S.	Beem
111-111	1	W., 8 to 11	S.	Beem
		Sat., 8 to 11	S.	Beem
113	2	F., 1 to 4	S.	Beem
113	2	Th., 1 to 4	S.	Beem
115	2	W., 1 to 4; Sat., 8 to 12	S.	Foust
		W., 8 to 11; Sat., 10 to 12	S.	
115	2	W., 8 to 11; Sat., 10 to 12	S.	
118	2	To be arranged	S.	Foust
119	3	W., Th., 8 to 11	S.	Knight
		F., 1 to 4; Sat., 8 to 11	S.	Knight

SHOPWORK—Continued

Course No.	Hours	Time	Room	Instructor
119	3	M., Tu., 8 to 11	S.	Knight
		M., Tu., 1 to 4	S.	
121	3	M., Tu., 1 to 4	S.	Knight
		W., Th., 1 to 4	S.	
121	3	W., Th., 8 to 11	S.	Knight
		F., 1 to 4; Sat., 8 to 11	S.	
123	2	To be arranged	S.	Knight
125-125	2	To be arranged	S.	Knight
127-127	2	To be arranged	S.	Knight
129-130	3	M., Tu., 1 to 4	S.	Beem
131	3	Th., F., 1 to 4	S.	Beem
133	2	Th., F., 1 to 4	S.	Beem
201-202	5 to 10	To be arranged	S.	

ZOOLOGY AND ENTOMOLOGY

Zoology

101-102	3	L., M., W., at 8	B. Z. 67	All In- structors
		M., W., at 9	B. Z. 67	
		M., W., at 10	B. Z. 67	
		M., W., at 1	B. Z. 67	
		M., W., at 2	B. Z. 67	
		M., W., at 3	B. Z. 67	
		Lab., M., 8 to 10	B. Z. 65, 69	
		M., 1 to 3	B. Z. 65, 69	
		Tu., 8 to 10	B. Z. 65, 69	
		Tu., 1 to 3	B. Z. 65, 69	
		Th., 8 to 10	B. Z. 65, 69	
		Th., 1 to 3	B. Z. 65, 69	
		F., 8 to 10	B. Z. 65, 69	
		F., 1 to 3	B. Z. 65, 69	
101	3	Tu., Th., at 3; Sat., 8 to 10	B. Z. 67, 65	
121-122	3 to 5	L., Tu., at 1	B. Z. 111	Kostir
		Lab., Tu., 2 to 4; Th., F., 1 to 4		
129	2 to 5	M., W., at 11	B. Z. 67	Barrows
130	2 to 5	M., W., at 11	B. Z. 67	Barrows
131-132	3	M., W., F., at 11	B. Z. 109	Osborn, Krecker
139-140	2	M., at 10; Tu., 1 to 4	B. Z. 207	Hine
141-142	3 to 5	To be arranged	B. Z.	
143-144	1	W., at 4	B. Z. 109	
145	3	To be arranged		
153-154	2 to 5	Tu., Th., at 9	B. Z. 67	Barrows
157-158	3 to 5	M., F., 10; W., 1 to 4	B. Z. 111	Krecker
223-224	3 to 5	To be arranged		
241-242	5 to 10	To be arranged		
247-248	5	To be arranged		

ZOOLOGY AND ENTOMOLOGY—Continued

Entomology

Course No.	Hours	Time	Room	Instructor
107-108	3	L. Tu., Th., at 8	B. Z. 67	Metcalf
		Tu., Th., at 1	B. Z. 67	Metcalf
		Lab., W., 8 to 10	B. Z. 65, 69	Metcalf
		W., 1 to 3	B. Z. 65, 69	Metcalf
112	3	Tu., Th., at 10	B. Z. 207	Hine
		Lab., Th., 1 to 4	B. Z. 207	
		Sat., 8 to 11	B. Z. 207	
113-114	4	M., W., at 3	B. Z. 109	
		Lab., M., F., 1 to 3	B. Z. 107	
137-138	3 to 5	Tu., Th., at 10	B. Z. 107	Osborn
		Lab., M., W., F., 1 to 4		
141-142	3 to 5	To be arranged	B. Z.	
143-144	1	W., at 4	B. Z. 109	
147	2	Tu., Th., at 10	B. Z. 209	Hine
148	2	Tu., Th., at 9	B. Z. 109	Osborn
149-150	3 to 5	M., F., at 11	B. Z. 211	Metcalf
		Lab., F., 8 to 11		
151-152	3	Tu., at 11	B. Z. 211	Metcalf
		Lab., Tu., 2 to 5; F., 1 to 4		
155-156	3	M., W., F., at 8	B. Z. 207	Hine
241-242	5 to 10	To be arranged	B. Z.	

The Ohio State University Bulletin is issued at least twenty times during the year; monthly in July, August, September, and June, and bi-weekly in October, November, December, January, February, March, April, and May.

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The Ohio State University Bulletin

VOLUME XXI

FEBRUARY, 1917

NUMBER 15

COLLEGE OF EDUCATION

UNIVERSITY OF COLUMBIA

FEB 20 1918

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1917-1918

1917 - 1918

PUBLISHED BY THE UNIVERSITY AT COLUMBUS

Entered as second-class matter November 17, 1905, at the postoffice at Columbus, Ohio, under Act of Congress, July 16, 1894.

UNIVERSITY CALENDAR

1917

Entrance examinations, Tuesday to Saturday, June 19 to 23, 8 A. M.

Summer Session, Thursday, June 21 to Thursday, August 16.

Entrance examinations, Tuesday to Saturday, September 11 to 15, 8 A. M.

Registration Day—First Semester—Tuesday, September 18.

President's Annual Address, Thursday, September 20, 11 A. M.

Latest date for registration of candidates for a degree at the Commencement of June, 1918, October 1.

Registration Day, Short Courses in Agriculture—First Term—Tuesday, October 16.

Mid-semester reports to the Deans concerning delinquent students, Wednesday, November 21.

Thanksgiving recess begins November 28, 1 P. M., and ends December 4, 8 A. M.

Christmas recess begins Friday, December 21, 6 P. M.

1918

Christmas recess ends Tuesday, January 8, 8 A. M.

Registration Day, Short Courses in Agriculture—Second Term—Tuesday, January 8.

Final examinations, Wednesday, January 23 to Thursday, January 31.

First semester ends Thursday, January 31, 6 P. M.

Farmers' Week, Monday, January 28 to Friday, February 1.

Registration Day—Second Semester—Tuesday, February 5.

Washington's Birthday, Friday, February 22.

Close of Second Term, Short Courses in Agriculture, Friday, March 15.

Mid-semester reports to the Deans, Saturday, March 16.

Easter recess, Friday, March 22, 6 P. M., to Tuesday, April 2, 8 A. M.

Memorial Day, Thursday, May 30.

Competitive Drill—Cadet Regiment—Saturday, June 1.

Final examinations, Wednesday, June 5 to Thursday, June 13.

Commencement, Tuesday, June 18.

Entrance examinations, Tuesday, June 25 to Saturday, June 29, 8 A. M.

Summer Session, Monday, June 24 to Friday, August 16.

- JOSEPH RUSSELL TAYLOR, M.A.....155 Thirteenth Avenue
Professor of English
- FRANCIS LEROY LANDACRE, Ph.D.....2026 Iuka Avenue
Professor of Anatomy
- CHARLES A. BRUCE, B.A.....1981 Indianola Avenue
Professor of Romance Languages
- KARL DALE SWARTZEL, M.Sc.....1952 Iuka Avenue
Professor of Mathematics
- ARTHUR ERNEST DAVIES, Ph.D.....95 East Woodruff Avenue
Professor of Philosophy
- JOSEPH ALEXANDER LEIGHTON, Ph.D., LL.D...55 Lexington Ave.
Professor of Philosophy
- JOHN H. SCHAFFNER, Ph.D.....174 Twelfth Avenue
Professor of Botany
- WILLIAM LLOYD EVANS, Ph.D.....81 South Champion Avenue
Professor of Chemistry
- MARSHALL BLAKEMORE EVANS, Ph.D.....38 Twelfth Avenue
Professor of German
- WILLIAM LUCIUS GRAVES, M.A.....1313 Forsythe Avenue
Professor of English
- GEORGE FREDERICK ARPS, Ph.D.....216 East Lane Avenue
Professor of Psychology
- CAROLINE MAY BREYFOGLE, Ph.D.....16 Fourteenth Avenue
Professor of Biblical Literature and Dean of Women
- BERTHOLD AUGUST EISENLOHR, M.A....356 Twentieth Avenue
Professor of German
- FREDERIC COLUMBUS BLAKE, Ph.D.....2107 Iuka Avenue
Professor of Physics
- HOMER C. HOCKETT, Ph.D.....Worthington
Professor of American History
- EDGAR HOLMES MCNEAL, Ph.D.....363 East Town Street
Professor of European History
- EDNA NOBLE WHITE, B.A.....238 West Tenth Avenue
Professor of Home Economics
- EDGAR SCHUGERT INGRAHAM, Ph.D...182 East North Broadway
Professor of Romance Languages
- SAMUEL EUGENE RASOR, M.Sc.....1594 Neil Avenue
Professor of Mathematics
- LYNN WILBUR ST. JOHN, B.Ph.....168 Twelfth Avenue
Professor of Physical Education

- JOHN WOODWORTH WILCE, B.A.....70 Twelfth Avenue
Professor of Physical Education
- FRANK RILEY CASTLEMAN, B.Sc.....113 East Norwich Avenue
Professor of Physical Education
- LEWIS F. ANDERSON, Ph.D.....Marble Cliff
Professor of History and Philosophy of Education
- JOHN F. LYMAN, Ph.D.....143 Brighton Road
Professor of Agricultural Chemistry
- FRANCIS WILLIAM COKER, Ph.D... ..213 Fourteenth Avenue
Professor of Political Science
- CLYDE ORVAL RUGGLES, Ph.D.....1457 Neil Avenue
Professor of Economics and Sociology
- GEORGE R. TWISS, B.Sc.....252 Eighteenth Avenue
Professor of Principles of Education
- GEORGE M. BOLLING, Ph.D.....93 North Ohio Avenue
Professor of Greek Language and Literature
- SAMUEL W. BROWN, Ph.D.....1764 N. High Street
Professor of School Administration
- CLARENCE E. PERKINS, Ph.D.....1653 Summit Street
Professor of European History
- EDGAR TRANSEAU, Ph.D.....333 King Avenue
Professor of Botany
- CHARLES FABENS KELLEY, B.A.... ..1951 Summit Street
Professor of Art
- ELDON L. USRY, B.M.E., M.A.....Brevoort Road
Professor of Manual Training
- CLYDE BROOKS, Ph.D., M.D.....262 Nineteenth Avenue
Professor of Physiology and Pharmacology
- RAYMOND C. OSBURN, Ph.D.
Professor of Zoology and Entomology

ASSOCIATE PROFESSORS

- CHARLES LINCOLN ARNOLD, M.Sc.....328 West Eighth Avenue
Associate Professor of Mathematics and Secretary of the College
- WILLIAM A. KNIGHT, M.E.....206 West Lane Avenue
Associate Professor of Machine Shop Practice

ASSISTANT PROFESSORS

- ROBERT FISKE GRIGGS, Ph.D.....241 North Broadway
Assistant Professor of Botany

- WALTER J. PEIRCE, Ph.D.....2091 Iuka Avenue
Assistant Professor of Romance Languages
- ROBERT MEIKLEJOHN, M.E.....419 W. Ninth Avenue
Assistant Professor of Engineering Drawing
- LOUIS A. COOPER, B.A.....1477 Worthington Street
Assistant Professor of English
- THEODORE E. HAMILTON, Ph.D.....319 King Avenue
Assistant Professor of Romance Languages
- WILLIAM M. BARROWS
Assistant Professor of Zoology and Entomology
- EDWIN LONG BECK, M.A.....230 West Tenth Avenue
Assistant Professor of English
- SARAH TRACY BARROWS, M.L.....1806 North High Street
Assistant Professor of German
- CARL JOSEPH WEST, Ph.D.....Grandview Heights
Assistant Professor of Mathematics
- THOMAS MCDUGAL HILLS, B.Ph.....1942 Iuka Avenue
Assistant Professor of Geology
- LUDWIG LEWISOHN, Litt.D.....14 Twelfth Avenue
Assistant Professor of German
- GEORGE S. CHAPIN, M.A.....55 East Woodruff Avenue
Assistant Professor of Romance Languages
- ANNA R. VAN METER, M.Sc.....238 West Tenth Avenue
Assistant Professor of Home Economics
- CARL E. PARRY, Ph.D.....212 West Tenth Avenue
Assistant Professor of Economics and Sociology
- WILMER G. STOVER, M.A.....249 East Maynard Avenue
Assistant Professor of Botany
- ALBERT RICHARD CHANDLER, Ph.D...241 West Eleventh Avenue
Assistant Professor of Philosophy
- ARTHUR MEIER SCHLESINGER, M.A.....398 West Ninth Avenue
Assistant Professor of American History
- RUDOLF PINTNER, Ph.D.....21 University Court
Assistant Professor of Psychology
- FREDERICA DETMERS, Ph.D.....328 West Ninth Avenue
Assistant Professor of Botany
- FREDERICK H. KRECKER, Ph.D.....1470 Pennsylvania Avenue
Assistant Professor of Zoology and Entomology
- ALBERT P. WEISS, M.A.....2098 Indiana Avenue
Assistant Professor of Psychology

THOMAS GUTHRIE PHILLIPS, M.Sc.....	349 West Tenth Avenue
<i>Assistant Professor of Agricultural Chemistry</i>	
CLARENCE E. ANDREWS, Ph.D.....	234 West Ninth Avenue
<i>Assistant Professor of English</i>	
MILTON PERCIVAL, Ph.D.....	289 Eighteenth Avenue
<i>Assistant Professor of English</i>	
FLORENCE A. MEYER, M.A.....	39 Thirteenth Avenue
<i>Assistant Professor of Physical Education</i>	
JOHN LEROY CLIFTON, B.Sc. in Education..	1852 Summit Street
<i>Assistant Professor of Principles of Education</i>	
HEINRICH C. KEIDEL, Ph.D.....	196 West Sixth Avenue
<i>Assistant Professor of German</i>	
WILFORD M. AIKIN, M.A.....	1581 Michigan Avenue
<i>Assistant Professor of Principles of Education</i>	

INSTRUCTORS

EDWIN P. DURRANT, M.A.....	Westerville
<i>Instructor in Physiology</i>	
CLEMENT M. BEEM.....	1872 Summit Street
<i>Instructor in Industrial Arts</i>	
ALICE REBECCA ROBINSON, B.L., B.Ped., B.Sc..	12 Fourteenth Ave.
<i>Instructor in Art</i>	
HENRY CONRAD OHLSON.....	16 West Tenth Avenue
<i>Instructor in Physical Education</i>	
MARY LOUISE SHEPHERD, B.Sc. (Edu.).....	965 Bryden Road
<i>Instructor in Art</i>	
WILLIAM J. NORRIS.....	60 East Eighth Avenue
<i>Instructor in Art</i>	
JAY K. DITCHY, M.A.....	30 Fourteenth Avenue
<i>Instructor in Romance Languages</i>	
WILMER C. HARRIS, Ph.D.....	1330 Forsythe Avenue
<i>Instructor in European History</i>	
ALEXANDER PARKS MOORE, M.A.....	1981 Indianola Avenue
<i>Instructor in Romance Languages</i>	
CLARA GOULD MARK, M.A.....	186 Sixteenth Avenue
<i>Instructor in Geology</i>	
HORACE BOOKWALTER DRURY, Ph.D....	140 East Blake Avenue
<i>Instructor in Economics and Sociology</i>	
VICTOR WILLIAM BRUDER, M.A.....	40 East Oakland Avenue
<i>Instructor in Economics and Sociology</i>	

MARION L. TUCKER, B.Sc.....	30 Thirteenth Avenue
<i>Instructor in Home Economics</i>	
CARL GUY DISHONG, M.A.....	75 West Tenth Avenue
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CARL L. SVENSEN, B.Sc.....	1565 Highland Street
<i>Instructor in Engineering Drawing</i>	
JOHN ELLIS EVANS, Ph.D.....	2879 East Avenue
<i>Instructor in Psychology</i>	
ROBERT C. HUMMELL, M.A.....	139 West Ninth Avenue
<i>Instructor in Chemistry</i>	
GEORGE A. WOOD, M.A.....	47 Twelfth Avenue
<i>Instructor in American History</i>	
ERWIN O. CHRISTENSEN, B.Sc.....	1981 Indianola Avenue
<i>Instructor in Art</i>	
VERA MARION MCCOY, M.A.....	19 Alhambra Court
<i>Instructor in Bacteriology</i>	
HARRY W. CRANE, Ph.D.....	152 East Northwood Avenue
<i>Instructor in Psychology</i>	
LILA SKINNER, M.A.....	389 West Tenth Avenue
<i>Instructor in Home Economics</i>	
GRACE G. WALKER, B.Sc.....	53 Chittenden Avenue
<i>Instructor in Home Economics</i>	
MAUDE G. ADAMS, B.Sc. in Education....	20 Thirteenth Avenue
<i>Supervisor of Practice Teaching in Home Economics</i>	
JAMES W. BRIDGES, Ph.D.....	18 Huston-Fergus Court
<i>Instructor in Psychology</i>	
JAMES E. DUNLAP, M.A.....	59 Chittenden Avenue
<i>Instructor in Latin</i>	
LEOPOLD CARDON, B.L.....	93 West Eleventh Avenue
<i>Instructor in Romance Languages</i>	
HEINRICH W. REESE, B.A.....	1293 Neil Avenue
<i>Instructor in German</i>	
MABEL E. GOUDGE, Ph.D.....	336 Twentieth Avenue
<i>Instructor in Psychology</i>	
ELMER CULLER, Ph.D.....	98 East Frambes Avenue
<i>Instructor in Psychology</i>	
CARL WITCKE, M.A.....	352 Eighteenth Avenue
<i>Instructor in American History</i>	
E. LEIGH MUDGE, Ph.D.....	289 Buttles Avenue
<i>Instructor in Psychology</i>	

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the city of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called colleges. The Ohio State University comprises eleven colleges and a graduate school, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Engineering
College of Agriculture	College of Homoeopathic
College of Arts, Philosophy and Science	Medicine
College of Commerce and Journalism	College of Law
College of Dentistry	College of Medicine
College of Education	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a Director and governing committee for the administration of the regular University courses offered in the summer.

This bulletin is devoted exclusively to the work of the College of Education for the academic year, 1917-18.

(NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing L. E. Wolfe, Secretary of the Entrance Board, Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.)

COLLEGE OF EDUCATION

This college is one of the officially approved instrumentalities of the State for the professional training of teachers, as provided in the school laws of this State. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the college is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this college leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Manual Training, Home Economics, Agricultural Education, Agricultural Chemistry, American History, Anatomy, Bacteriology, Biblical Literature, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

PHYSICAL EDUCATION

Provision has been made by the College of Education to meet the increasing demand in the public schools for directors and teachers of physical education, and for athletic coaching. Regular students in the college preparing for high school teaching

may include in their curriculum Physical Education as a "minor subject" and receive credit for it towards their degree. The minor consists of twelve semester hours in addition to the courses required of first and second year students. In each case the approval of the Head of the Department of Physical Education and of the Dean of the college must be obtained.

For further details see the courses as announced on page 82.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Secretary of the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two summer sessions are considered the equivalent of one semester and four summer sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this College. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school teachers' certificate, without examination. This certificate, obtainable from the State Superintendent of Public Instruction on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Manual Training, in Art or in Agricultural-Education are also entitled, without further examination, to a state provisional special certificate valid for four years, in the appropriate one of the above

lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

ADMISSION

The College is open on equal terms to both sexes.

Applicants for admission must be at least sixteen years of age.

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, a student must receive credit by examination or certificate for fifteen entrance units; but an applicant who passes thirteen units may be admitted with two conditions.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded, as he will be required to carry courses in the University to make up the deficiency and he may not be able to obtain a degree in the usual four years.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, manual training, home economics, and agriculture.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps, (as defined in General Orders No. 49 as may be amended in the future by the War Department) the total number of hours required in the General Course for the degree of Bachelor of Science in Education is 112 (instead of 120) semester hours, in addition to the work in military training and physical education. For the other curricula in the College of Education a like reduction of eight hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

GENERAL COURSE

The work of the first two years must include:

(a) English

- | | |
|--|---------------|
| (a) English 101 and 104 | (2-2) 4 hours |
| English 133 and either English 141, 142,
145 or 146 | (3-3) 6 hours |
- English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency.

(b) Languages

- (b) One of the following languages which must be pursued through both the first and second years: (4-4-4-4) 16 hours
- Greek
 - Latin
 - French
 - German
 - Spanish

The second year will not be required of students who offer six entrance units in foreign language.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) Mathematics

- (c) Mathematics 121-122: (3-3) 6 hours, or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study. Every student must secure credit either in high school, or in the college for algebra through quadratics, and for plane geometry.

(d) Science

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104

Chemistry 105-106 or 109-110

Geology 101-102

Astronomy 101-102

Biological:

Physiology 101-102

Zoology 101-102

Botany 101-102

Every student is required to take one of the above sciences in college, and every student is also required to have either entrance or college credit for both a biological and a non-biological science. Students who enter without one unit in physics or in chemistry must take one of these subjects in college. Students who enter without one unit in zoology or in botany must take a biological science in college. Students who have entrance credit for one unit in physics or chemistry and one unit in zoology or in botany must take a science in college.

(e) History

(e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one unit of history for entrance the requirement is twelve semester hours.

(f) Psychology (3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education not less than 6 hours

Elements of Sociology not less than 6 hours

Educational Psychology not less than 4 hours

The Principles and Practice of Teaching, not less than 6 hours

School Administration not less than 6 hours

A course in the teaching of the major subject, not less than 2 hours.

(2) Major Courses

The work which the student is preparing to teach (selected in the first or second year) hours enough—usually thirty semester hours—to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

CURRICULA

GENERAL COURSE

FIRST YEAR

First Semester			Second Semester	
English	(101)	2	English	(104) 2
Group (b)		4	Group (b)	4
Group (c) or elective		3	Group (c) or elective	3
Group (d)		4	Group (d)	4
Group (e)		3	Group (e)	4
Physical Education		1	Physical Education	1
Military Drill		1	Military Drill	1

SECOND YEAR

English	(141 or 145)	3	English	(133) 3
or			or	
English	(133)	3	English	(142 or 146) 3
Psychology	(101)	3	Psychology	(102) 3
Group (b)		4	Group (b)	4
Major Work		5	Major Work	5
Physical Education (women)		1	Physical Education (women)	1
Military Drill		1	Military Drill	1

THIRD YEAR

Sociology	(101)	3	Sociology	(102) 3
History of Education	(101)	3	History of Education	(102) 3
Educational Psychology	(107)	2	Educational Psychology	(108) 2
Major Work		5	Major Work	5
Correlated Work		2	Correlated Work	2

FOURTH YEAR

Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104) 3
School Administration	(101) or (111)	3	School Administration	(102) or (112) 3
Major Work		5	Major Work	5
Elective		4	Elective	4

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, exclusive of the requirement in military drill and physical education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units or less than three, of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the biological science required in the curriculum.

Students who enter without one unit in history, must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART**FIRST YEAR**

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 4	Botany	(102) 4
European History	(101) 3	European History	(102) 3
Physical Education	1	Physical Education	1
Military Drill	1	Military Drill	1

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Drill	1	Military Drill	1

For Students Majoring in Drawing**THIRD YEAR**

Sociology	(101) 3	Sociology	(102) 2
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(135) 4
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	3	Elective	2

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

For Students Majoring in Design**THIRD YEAR**

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(134) 2
Art	(142) 3	Art	(143) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	3

FOURTH YEAR

First Semester		Second Semester	
History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(135) 4	Art	(144) 3
Art	(117) 3	Art	(145) 3
School Administration	(101) 3	Elective	3

For Students Majoring in History and Appreciation of Art

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(155) 2
Art	(154) 2	Art	(156) 2
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(157) 3	Art	(158) 5
Art	(117) 3	Elective	4
School Administration	(101) 3		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units and less than three of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics must take this subject in addition to the science requirements of the course.

Students who enter without one unit in history, must take at least six semester hours, of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester			Second Semester		
Chemistry	(105 or 109)	4	Chemistry	(106 or 110)	4
English	(101)	2	English	(104)	2
Zoology	(101)	3	Zoology	(102)	3
French or German		4	French or German		4
Home Economics	(111)	2	Home Economics	(112)	2
Physical Education		1	Art	(119)	1
			Physical Education		1

SECOND YEAR

Chemistry	(127)	4	Agricultural Chemistry	(123)	4
Home Economics	(101)	5	Home Economics	(102)	5
Physiology	(101)	3	Physiology	(102)	3
French or German		4	French or German		4
Physical Education		1	Physical Education		1

THIRD YEAR

Psychology	(101)	3	Psychology	(102)	3
Economics	(101)	3	Economics	(102)	3
Bacteriology	(107)	4	Home Economics	(108)	2
Art	(131)	2	Home Economics	(104)	3
History of Education	(101)	3	Art	(141)	2
			History of Education	(102)	3

FOURTH YEAR

Sociology	(101)	3	Sociology	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Home Economics	(118)	3	School Administration	(102)	3
School Administration	(101)	3	Home Economics	(119)	3
Elective		4	Elective		4

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

MANUAL TRAINING

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects in addition to the requirement of the course. Students who enter without one unit in zoology or in botany, must take a biological science. Students who enter without one unit in history, must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

MANUAL TRAINING

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Art	(119) 1	Art	(141) 2
Art	(131) 2	Shopwork	(133) 2
Engineering Drawing	(139) 4	Engineering Drawing	(140) 3
Foreign Language	4	Foreign Language	4
Physical Education	1	Physical Education	1
Military Drill	1	Military Drill	1

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Foreign Language	4	Foreign Language	4
Psychology	(101) 3	Psychology	(102) 3
Shopwork	(129) 3	Shopwork	(130) 3
Shopwork	(105) 2	Shopwork	(115) 2
Military Drill	1	Military Drill	1
Elective	2 or 3	Elective	2 or 3

THIRD YEAR

Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
or		or	
Physics	(103 or 105) 4	Physics	(104 or 106) 4
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Manual Training	(117) 2	Manual Training	(118) 2
Shopwork	(119) 3	Shopwork	(113) 2
Elective	2 to 4	Elective	3 or 4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Manual Training	(111) 3	Manual Training	(112) 3
Principles and Practice	(101) 3	Principles and Practice	(104) 3
School Administration	(101) 3	Elective	6 to 9
Elective	3 to 6		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

AGRICULTURAL EDUCATION

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects, in addition to the requirement of the course.

Students who enter without one unit in zoology or in botany, must take a biological science in addition to the requirement of the course.

Students who enter without one unit in history, must take at least six semester hours of either American or European history.

AGRICULTURAL EDUCATION

FIRST YEAR

First Semester		Second Semester	
School Administration	(123) 3	School Administration	(124) 3
Elements of Agriculture		Elements of Agriculture	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
Rural Economics	(101) 2	Engineering Drawing	(125) 2
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Physical Education	1	Physical Education	1
Military Drill	1	Military Drill	1

SECOND YEAR

Economics	(101) 3	Economics	(102) 3
Psychology	(101) 3	Psychology	(102) 3
Zoology	(101) 3	Zoology	(102) 3
Botany	(101) 4	Botany	(102) 4
Forestry	(101) 2	Horticulture	(156) 2
Military Drill	1	Military Drill	1

THIRD YEAR

History of Education	(101)	3	History of Education	(102)	3
Horticulture	(101)	4	Horticulture	(120)	4
Dairying	(101)	4	Agricultural Engineering	(101)	4
Animal Husbandry	(103)	4	Animal Husbandry	(104)	4

FOURTH YEAR

School Administration	(127)	2	School Administration	(122)	2
Principles of Education	(101)	3	Principles of Education	(104)	3
Zoology	(107)	3	Zoology	(108)	3
Geology	(151)	3	Farm Crops	(101)	4
Elective		4	Elective		3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credits for one hundred and forty hours, exclusive of the requirement in military drill and physical education, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.

Students registered for this combined Arts-Education curriculum must ordinarily expect to use at least one summer session in addition to the four years to complete the work.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN, LYMAN AND BEAR, ASSISTANT PROFESSOR
T. G. PHILLIPS, MR. SALTER, MR. HUTCHINSON, MR. McCLURE,
MR. SLEETH AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. **Household Chemistry.** Four credit hours. Second semester. Home Economics. Prerequisite, Chemistry 106 or 110. Mr. Lyman, Mr. Phillips.

Lectures on household chemistry. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods and other materials of household interest.

SOILS

152. **Elementary Soils.** Five credit hours. Second semester. Two lectures, one quiz and six laboratory hours each week. Prerequisite, Agricultural Chemistry 103. Mr. Vivian, Mr. Bear.

An introductory course on the origin and the chemical and physical properties of soils, their management and fertilization.

AGRICULTURAL EDUCATION

(See School Administration)

AGRICULTURAL ENGINEERING

Office, 205 Home Economics Building

PROFESSOR RAMSOWER, ASSISTANT PROFESSOR IVES, MR. McCUEN,
MR. POTTER

101. **Farm Engineering.** Four credit hours. Either semester. Prerequisite, Engineering Drawing 125. Mr. Ramsower, Mr. Potter.

Lectures and recitations on the laying out and equipment of the farm, and a detailed study of farm power, water supply, and farm machinery. Practice in the comparison and testing of farm machines, handling concrete, rope splicing and in the working out of problems in farm mechanics.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT AND HOCKETT, ASSISTANT PROFESSOR
A. M. SCHLESINGER, MR. WOOD, MR. WITTKE

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), courses 101-102 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher, 101-102, 103-104, 119, 128, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 133-134 and Economics 101-102 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1912). Three credit hours. The year. Mr. Hockett, Mr. Schlesinger, Mr. Wood, Mr. Wittke.

American History 101 is given also during the second semester, and American History 102 in the first semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases receive chief attention. The first semester covers the period 1763-1829. The second semester covers the period 1829-1912. Text-book, discussion, and collateral readings. This course must precede all other courses in American history.

128. The History of Ohio. Two credit hours. Second semester. Prerequisite, American History 101-102. Mr. Hockett.

The settlement and early development of the state will be surveyed rapidly, and more intensive study given to the period since 1850. Lectures, discussion and reports.

107. Formation of the Constitution. Two credit hours. First semester. Prerequisite, American History 101-102. Political Science 133 will be found a valuable adjunct to this course. Mr. Hockett.

Beginning with a brief study of the constitutional ideas of Americans in the revolutionary period, the course traces the formation of the federal constitution by the convention of 1787, and discusses the constitutional problems involved in the establishment of the government. Lectures, discussion and reports.

108. Constitutional History of the United States. Two credit hours. Second semester. Prerequisite, American History 101-102. American History 107 affords a good foundation, and Political Science 133 a valuable adjunct. Mr. Hockett.

The chief controversies over the interpretation of the constitution and the effects of these controversies upon the evolution of the American constitutional system. Such questions are dealt with as the acquisition of territory, internal improvements, the tariff, slavery, and the relations of the nation and the states. Lectures, discussion and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102. Mr. Schlesinger.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1916). Two credit hours. Second semester. Prerequisite, American History 101-102. American History 109 affords a good foundation. Mr. Schlesinger.

The development of national parties in the period from 1852 to the re-election of Woodrow Wilson, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion and reports.

103-104. The American Colonies, 1600-1783. Three credit hours. The year. Prerequisite, American History 101-102. Mr. Wood.

The general history of the English colonies in America, with especial emphasis on European conditions affecting colonization, the development of government in the several colonies, and relations with the mother country, including the struggle for independence. Lectures, discussion and reports.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American history.

119. Introduction to Historical Research. Two credit hours. First semester. Prerequisite, four semesters in American history. Mr. Hockett.

Drill in finding historical material by the use of standard guides, manuals, and catalogs, followed by practice in criticising material, and exercises in historical composition. Each student then applies what has been learned by preparing an essay. Attention is given throughout to approved forms for note-taking, citation of authorities, etc. Designed especially for students who expect to teach American history in secondary schools, or to pursue graduate work in this field.

***111. The Slavery Struggle in the United States.** Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

***112. Reconstruction and its Results, 1863-1915.** Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Schlesinger.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

113. American Diplomacy to the Close of the Civil War. Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

*Not given in 1917-1918.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussion and reports.

114. Problems of American Diplomacy Since the Civil War. Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Knight.

Problems in the diplomacy of the United States, resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussion and reports.

130. Contemporary Accounts of American Life and Institutions. Three credit hours. Second semester. Given biennially. Prerequisites, American History 101-102, and at least two other semesters in American history. Mr. Schlesinger.

A critical study of the chief descriptions, criticisms and interpretations of American life and manners at different periods, written contemporaneously with the times discussed. Particular attention is given to the accounts by William Cobbett, the Trollopes, Harriet Martineau, De Tocqueville, Dickens, Chevalier, Charles Lyell and James Bryce.

121. The Teaching of American History. Two credit hours. First semester. Given biennially. Mr. Knight.

Lectures, reading and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment, examination of text-books; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accom-

panied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

FOR GRADUATES

203-204. The United States and Latin-America, 1800-1905.

205-206. Seminary in American History.

*207-208. Problems of Recent and Contemporary History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANATOMY

Office, 105 Biological Hall

PROFESSOR LANDACRE, ASSISTANT PROFESSOR BUCK, MR. WARREN,
MR. KNOUFF, MR. BAKER

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Baker.

Fishes, amphibians and reptiles.

102. Comparative Anatomy of the Vertebrates. Three to five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101, Physiology 101, or Zoology 101, or an equivalent. Required of students in the Arts-Medicine and Science-Medicine courses. Mr. Baker.

Birds and mammals.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight labora-

*Not given in 1917-1918.

tory hours each week. Not open to first year students. Mr. Landacre.

The histology and early development of the frog.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisite, one year of biological science. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisites, one year of biological science. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Comparative Neurology. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates.

110. Comparative Neurology. Three to five credit hours. Second semester. One lecture or conference and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

FOR GRADUATES

201-202. Vertebrate Embryology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANIMAL HUSBANDRY**Judging Pavilion**

PROFESSORS PLUMB AND KAYS, ASSISTANT PROFESSOR COFFEY

103. Breeds of Horses and Sheep. Four credit hours. First semester. Mr. Kays, Mr. Coffey.

Lectures, text-books and recitations upon the history, development, characteristics, and adaptation of types and breeds of horses and sheep. Laboratory work includes judging types and breeds of horses and sheep, one afternoon a week and occasional inspection trips to herds in the state.

104. Breeds of Cattle and Swine. Four credit hours. Second semester. Mr. Kays, Mr. Coffey.

Covers the subject of cattle and swine on the same basis as Animal Husbandry 103.

ART

Office, 203 Hayes Hall

PROFESSOR KELLEY, MISS ROBINSON, MISS SHEPHERD, MR. NORRIS, MR. CHRISTENSEN

131-132. Elementary Drawing. Two credit hours. The year. This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also in the second semester.

Art 132 is given also in the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133.

135. Illustrative Drawing. Four credit hours. Either semester. Prerequisite, Art 134.

Different methods of drawing for illustration.

136. Water Color Painting. Two credit hours. Either semester. Prerequisite, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. Advanced Water Color. Three credit hours. Second semester. Prerequisite, Art 136.

138. Oil Painting. Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. Advanced Oil Painting. Three credit hours. Second semester. Prerequisite, Art 138.

Painting from the costume model.

141. Elementary Design. Two credit hours. Either semester. Prerequisite, Art 131 and 119.

The principles of the theory and practice of design.

142. Advanced Design. Three credit hours. Either semester. Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. Specialized Design. Three credit hours. Second semester. Prerequisite, Art 142.

Field to be chosen by the student.

144. Commercial Design. Three credit hours. Second semester. Prerequisite, Art 142.

This course is aimed to give a grasp of commercial design problems.

145. Thesis Work Design. Three credit hours. Second semester. Prerequisite, Art 143.

This course is required of students graduating in design.

151. History of Classic Art. Three credit hours. Either semester.

The study of classic art with some consideration of the art of Egypt, Assyria, and Persia. Reading and reports.

152. History of Medieval Art. Three credit hours. Second semester. Prerequisite, Art 151.

Reading and reports.

153. History of Renaissance and Modern Art. Three credit hours. First semester. Prerequisite, Art 151.

From the beginning of the Renaissance in Italy to the present time. Reading and reports.

154. Greek Sculpture. Two credit hours. First semester. Prerequisite, Art 151.

Reading and short thesis.

155. The Italian Schools of Painting. Two credit hours. Second semester. Prerequisite, Art 151, 152, 153.

Reading and short thesis.

156. The Netherlandish Schools of Painting. Two credit hours. Second semester. Prerequisites, Art 151, 152, 153.

Reading and short thesis.

157. Art of China and Japan. Three credit hours. First semester. Prerequisite, junior standing.

Reading and reports.

158. Thesis in Art History. Five credit hours. Second semester. Prerequisite, fifteen hours of art history.

This course is required of students graduating in art history.

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments and observations.

119. Appreciation of Art. One credit hour. Either semester.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141. Miss Shepherd.

Art in dress; the direct application of design principles and color harmony to dress.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. General Astronomy. Three credit hours. The year. Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. Astronomy, Geodesy and Least Squares. Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. Advanced Astronomy. Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSOR MORREY, ASSISTANT PROFESSOR STARIN, MR. FRONING,
MISS MCCOY, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in bacteriology are open to advanced undergraduates and graduate students only, not to freshmen or sophomores. The instructor in charge must be consulted before electing.

107. General Bacteriology. Four or five credit hours. First semester. Mr. Morrey, Mr. Froning, Miss McCoy, and department assistants.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods, and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mr. Froning, Miss McCoy.

A study of the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Miss McCoy.

A study of the methods and devices used in these processes and of the organisms concerned. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

116. Bacteriological Chemistry. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

119-120. Pathogenic Protozoa. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmosis, and spirochaetosis.

125-126. Special Problems in Bacteriology. Three to five credit hours. The year. Conferences, library and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

BIBLICAL LITERATURE, HISTORY AND EXEGESIS

Office, 103 Orton Hall

PROFESSOR BREYFOGLE

101. Biblical Literature. Three credit hours. First semester. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the literature, history and religion of the Old Testament. A general course touching upon the historical

crises of the Old Testament with an attempt to recreate the political, economic and social conditions as a basis for the better understanding of the moral and religious teachings. A stereopticon will be used, showing the latest discoveries in Palestine, Egypt and Assyria, which bear upon the period.

102. Historical Christianity in Outline. Three credit hours. Second semester. Miss Breyfogle.

A consideration of Judaism, of the life, work and teachings of the Founder of Christianity, and of Apostolic teaching.

Intended to give the student a systematic knowledge of the New Testament in its historical setting. The relation of Christianity to Hellenistic Judaism, the teachings of Jesus as shown by a comparison of the gospels, and the expansion of Christianity throughout the world during the Apostolic times. Stereopticon views will be freely used and an endeavor made to familiarize the student with the text.

***103-104. The History of Religion in Outline.** Three credit hours. The year. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the great book religions of the world.

BIBLIOGRAPHY

Office, The Library

MISS JONES, MR. REEDER

101-102. The Library and the School. One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS SCHAFFNER AND TRANSEAU, ASSISTANT PROFESSORS GRIGGS, DETMERS, AND STOVER, MR. SEARS, AND DEPARTMENT ASSISTANTS

101-102. General Botany. Four credit hours. The year. Mr. Schaffner, Mr. Griggs, Miss Detmers, Mr. Stover, Mr. Sears.

*Not given in 1917-1918.

Text-books: Curtis's Nature and Development of plants (4th edition), Schaffner's Laboratory Outlines for General Botany (4th edition).

A general survey of the plant kingdom by the comparative method of morphological types and life cycles. A general view of the morphology, evolution, and classification of plants from the lowest to the highest.

107. Plant Histology. Two credit hours. First semester. Prerequisite, Botany 101-102 or equivalent. Miss Detmers.

The physical structure and properties of protoplasm are studied; then, in order, the cell, the tissues, tissue systems and finally the histological structure of the plant organs are taken up. The course is designed as a preparation for the study of pharmacognosy and also to assist those who wish to teach botany, to prepare temporary and permanent mounts.

110. General Dendrology. Two credit hours. First semester. Mr. Sears.

Text-book: Schaffner's Field Manual of Trees.

A study of trees and shrubs, with practice in the identification of woody plants, in both summer and winter condition. Students are required to prepare a dendrological herbarium.

113. Morphology of the Higher Fungi. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Botany 101-102. Mr. Stover.

A study of the fungus flora, both fleshy and woody forms, with especial reference to edible and poisonous mushrooms and to the wood-destroying species.

120. Field Botany. Three credit hours. Second semester. Prerequisite, Botany 101. Mr. Griggs.

Excursions are made to most of the interesting localities within reach of Columbus on Saturday. On Monday afternoon material collected in the field is determined.

***123-124. Advanced Morphology.** Three to five credit hours. The year. Prerequisite, Botany 101-102 or equivalent. Mr. Griggs.

Intended to complete the morphological training begun in the first year. Instruction in microtechnique. Whenever possible this course should be accompanied by Botany 135-136.

*Not given in 1917-1918.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102 or equivalent. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors.

143-144. Plant Distribution. Three credit hours. The year. Prerequisite, Botany 101-102. Given biennially, alternating with Botany 123-124. Mr. Griggs.

The principal vegetational areas of the earth with the characteristic plants of each, giving especial attention to the biographic areas of North America.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisite, Botany 101-102 and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory and field work, with practice teaching under supervision.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

117-118. Plant Ecology. Three credit hours. The year. Lecture and laboratory. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Mr. Transeau.

The ecological relations of the forests, prairies, and deserts of North America. Field work on the local plant associations.

127-128. General Plant Pathology. Four credit hours. The year. Laboratory and field work. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Text-books: Stevens' *Fungi* and Stevens and Hall's *Diseases of Economic Plants*. Mr. Griggs.

129-130. Systematic Botany. Three to five credit hours. The year. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phyletic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

131-132. Cytology and Microtechnique. Three to five credit hours. The year. Prerequisite, Botany 123-124 or equivalent. Mr. Schaffner.

133-134. Minor Investigations. Three to five credit hours. The year. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Mr. Schaffner, Mr. Transeau, Mr. Griggs, Miss Detmers, Mr. Stover.

135-136. Evolution of Plants. One credit hour. The year. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Schaffner.

The progress of evolution in the plant kingdom with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

FOR GRADUATES

201-202. Research in Systematic Botany.

203-204. Research in Morphology and Cytology.

205-206. Research in Physiology and Ecology.

207-208. Research in Mycology and Plant Pathology.

209-210. Seminary in Botany.

For description of graduate courses in this department see the Bulletin of the Graduate School.

CHEMISTRY

Office, 100 Chemistry Hall

PROFESSORS McPHERSON, HENDERSON, FOULK, WILLIAM L. EVANS,
AND WITHROW, ASSISTANT PROFESSORS BOORD AND
OLIN, MR. HUMMELL, MR. YOUNG, MR. SWEENEY,
AND DEPARTMENT ASSISTANTS

105. Elementary Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Hummell, Mr. Young, and department assistants.

A general course on the chemistry of the non-metals, arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Chemistry 106, second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 105. Mr. Evans, Mr. Hummell, Mr. Young, and department assistants.

A general course on the chemistry of the metals. The laboratory work accompanying is a general introductory course in qualitative analysis.

109. General Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Hummell, Mr. Young, and department assistants.

A general course on the chemistry of the non-metals. It is more advanced than Chemistry 105 and is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Chemistry 110, second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 109. Mr. Evans, Mr. Hummell, Mr. Young and department assistants.

A general course on the chemistry of non-metals. It is more advanced than Chemistry 106. The laboratory work is a general course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. Prerequisite, Chemistry 106 or 110. Mr. Henderson, Mr. Stegeman.

A course of fundamental topics in the field of advanced general chemistry.

117. Qualitative Analysis. Three credit hours. First semester. One lecture and six laboratory hours each week. Prerequisite, an acceptable course in general chemistry. Mr. Olin.

An elementary course in qualitative analysis. Similar to Chemistry 106 and 110 and is arranged for students with advanced standing who have had no qualitative analysis.

119-120. Quantitative Analysis. Four credit hours. The year. One lecture, nine laboratory hours each week. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 106 or 110 or equivalent. Mr. Foulk, Mr. Olin, Mr. Hollingsworth.

Elementary principles of gravimetric and volumetric analysis, with typical analytical methods. This course must be accom-

panied by Chemistry 124, except by special permission of the instructor. It is also desirable that it be accompanied by Chemistry 113-114.

124. Chemical Problems. One credit hour. Second semester. Mr. Foulk.

Extended practice in the solution of problems pertaining to gravimetric and volumetric analysis. This course is arranged to accompany Chemistry 119-120.

127. Organic Chemistry. Four credit hours. First semester. Three lectures, one quiz each week. Prerequisite, an acceptable course in general chemistry. Mr. Boord.

This is a general introductory course in organic chemistry.

151-152. Organic Chemistry. Two credit hours. The year. Prerequisite, Chemistry 109-110, 113-114 and 119-120, except by special permission of the instructor. Mr. McPherson.

Lectures in organic chemistry.

153-154. Organic Chemistry. Two or three credit hours. The year. Six or nine laboratory hours each week. Laboratory open afternoons. This course must be accompanied or preceded by Chemistry 151-152. Mr. McPherson, Mr. Boord.

The preparation of typical organic compounds.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157-158. Physical Chemistry. Three credit hours. The year. Prerequisite, Chemistry 113-114, 119-120 and 151-152, except by special permission of the instructor. Mr. Henderson.

This is a general course in physical chemistry.

161. Physical Chemistry. Two or three credit hours. Either semester. Six to nine laboratory hours each week. Prerequisite or concurrent, Chemistry 157-158. Mr. Henderson, Mr. Stegeman.

An elementary course in physico-chemical measurements, including such topics as molecular weights and conductivity.

187. Inorganic Preparations. Two or three credit hours. Either semester. Six to nine laboratory hours each week. Laboratory open afternoons. Prerequisite, Chemistry 114 and 120. Mr. Henderson, Mr. Stegeman.

The preparation of a limited number of compounds chosen so as to give practice in the different kinds of manipulation involved in the preparation of inorganic compounds.

132. The Teaching of Chemistry. Two credit hours. Second semester. Two recitations or conferences each week. Elective. Prerequisite, Chemistry 105-106 (or 109-110), 119, 151-152. Mr. McPherson.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

PROFESSOR BOLLING, ASSISTANT PROFESSOR BARROWS

197. English Sounds for Foreigners. Two credit hours. First semester. No prerequisite. Miss Barrows.

The object of this course is to give the student fluency and accuracy in the use of English sounds, by means of a detailed comparison of the sounds in the native language of the student with those of English; exercises in articulation, adapted in each case to the individual needs of the student; practice in reading aloud.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

195. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

DAIRYING

Office, 111 Townshend Hall

PROFESSOR ERF, ASSISTANT PROFESSORS CUNNINGHAM
AND STOLTZ

101. Principles of Dairying. Four credit hours. Either semester. Prerequisite to all other courses in dairying. Mr. Erf, Mr. Cunningham, Mr. Stoltz.

Lectures will be given on the relation of dairying to general agriculture; the composition of dairy products and the laws governing them; the secretion of milk and the testing of milk for butter fat; the formation of profitable herds; testing indi-

vidual cows and herds for butter fat; entering and testing cows for Advanced Registries. In the laboratory, practical work will be given in the testing of milk and dairy products, and testing dairy herds for butter fat production.

ECONOMICS AND SOCIOLOGY

Office, 5 Page Hall

PROFESSORS HAGERTY, HAMMOND, LOCKHART, HUNTINGTON, AND RUGGLES, ASSISTANT PROFESSORS WALRADT, PARRY, AND NORTH, MR. DRURY, MR. BRUDER, MISS LOUISE MARK, MR. McKENZIE, MR. BICE, MR. GEPHART, MR. PFEIFFER AND DEPARTMENT ASSISTANTS

ECONOMICS

131. Economic and Social History of England and the United States. Three credit hours. First semester. Open only to second year students. Mr. Walradt.

133. Economic Geography. Three credit hours. Second semester. Open only to second year students. Mr. Huntington.

The influences of geographic environment, with special reference to North America.

101-102. Principles of Economics. Three credit hours. The year. Not open to first year students. Should precede all courses in Economics except 131, 133, concurrent 139. Mr. Hammond, Mr. Lockhart, Mr. Ruggles, Mr. Parry, Mr. Drury, Mr. Bice, Mr. Gephart.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Text-book, lectures and individual investigation.

Economics 102 is given also during the first semester. Mr. Walradt.

Economics 101 is given also during the second semester. Mr. Walradt.

139. Elements of Accounting. Three credit hours. Either semester. Prerequisite, registration in Economics 101-102. Mr. Huntington and assistants.

An introduction to practical accounting, including the preparation and interpretation of business statements.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102, or Economics 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effect upon the home. Organization of the household with reference to the functions of man and woman.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 101-102. Mr. Lockhart.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141. Mr. Lockhart.

A critical examination of tax systems with particular reference to questions of incidents and of proposed reforms. The Ohio system of taxation will be given special consideration.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Huntington.

A study of the basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

160. International Commercial Policies. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Parry.

Theory of international trade; historic policies, mercantilism, free-trade and protection. A study of the tariff policy of the United States, with a comparative study of the policies of the

British Empire, France and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Hammond.

A study of the labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. The Organization and Remuneration of Labor. Three credit hours. Second semester. Prerequisite, Economics 101-102. Mr. Hammond.

History of the labor movement. Trade union policies and methods. Employers' organizations. Collective bargaining. Industrial arbitration. Attempts to modify the wage system. Time, piece, and progressive wages. Profit sharing, labor co-partnership, and co-operation.

119. Women in Industry. Three credit hours. First semester. Prerequisite, Economics 101-102 or Sociology 101-102. Miss Mark.

A study of the economic position of women. Their relation to the household; their industrial and commercial opportunities; their preparation for various occupations. Legal, social and industrial problems created by the entrance of women into the field of industry.

FOR GRADUATES

203-204. Distribution of Wealth.

207-208. Seminary in Economics.

209-210. Research in Corporations and Labor.

211-212. Research in Transportation and Public Utilities.

213-214. Research in Banking and Finance.

215-216. Research in Economic and Social Statistics.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SOCIOLOGY

101-102. Principles of Sociology. Three credit hours. The year. Mr. Hagerty, Mr. North, Mr. Bruder, Miss Mark, Mr. McKenzie.

Not open to first year students.

A study of the fundamental principles of sociology. Text-book, lectures, collateral reading and individual investigation.

Sociology 101 is given also during the second semester.

Sociology 102 is given also during the first semester.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102. Mr. McKenzie.

A study of the matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman and Medieval Periods. The modern family, its functions and its problems.

123. Anthropology. Three credit hours. First semester. Mr. Bruder.

An elementary study of the essential characteristics of mankind and of the distinguishing traits of the several races of men; the origin and development of various races. Anthropological problems. Text-book, lectures, discussion and readings.

124. Ethnology. Three credit hours. Second semester. Prerequisite, Sociology 123. Mr. Bruder.

A genetic study of the social, occupational, and mental life of the several races of men. The origin and development of the various institutions and activities which have had their beginning in primitive society. Ethnological problems. Text-book, lectures, discussion and readings.

127. Leisure and Recreation. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101. Mr. North.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problem of modern communities from the standpoint of control and of public provision. Recreation surveys.

128. Social Organization and Administration of Recreation Facilities. Three credit hours. Second semester. Prerequisite, Sociology 127. Mr. North.

Methods and means of control of commercialized recreation with especial reference to American cities and towns. The promotion and organization of public and semi-public agencies.

The administrative control of play-grounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104. **The Immigrant.** Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Bruder.

The causes and sources of migration, provisions for transportation, immigration laws, and the assimilation of nationalities.

105. **The Negro.** Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Bruder.

Tropical man and the results of his transference to a temperate clime. Negro health, crime, education and progress in the United States.

131. **The Criminal.** Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

The social, economic and physiological causes of crime. The changing character of crime as modified by the legal code. Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

FOR GRADUATES

201-202. **Advanced Sociology.**

207-208. **Seminary in Sociology.**

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSOR FRENCH, ASSISTANT PROFESSORS MEIKLEJOHN,
WILLIAMS, AND TURNBULL, MR. GILBERT, MR. SVENSEN,
MR. INAGAKY, MR. BATESOLE AND DEPARTMENT
ASSISTANTS

101. **Elementary Mechanical Drawing.** Two credit hours. Either semester. Mr. French and department assistants.

Practice in the use of drawing instruments, elementary projections.

102. Mechanical Drawing. Three credit hours. Either semester. Prerequisites, Engineering Drawing 101 or 139. Mr. French and department assistants.

103. Descriptive Geometry. Three credit hours. First semester. Prerequisite, Engineering Drawing 102.

Two recitations and one two-hour drawing period each week.

104. Machine Sketching. Three credit hours. Second semester. Prerequisite, Engineering Drawing 103.

One lecture and two two-hour drawing periods each week.

139. Drawing for Manual Arts Teachers. Four credit hours. First semester. Manual Training, first year.

140. Drawing for Manual Arts Teachers. Three credit hours. Second semester. Prerequisite, Engineering Drawing 139. Manual Training, first year.

125. Mechanical Drawing. Two credit hours. Either semester.

131-132. The Teaching of Mechanical Drawing. Three credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT AND GRAVES, ASSISTANT PROFESSORS COOPER, BECK, KETCHAM, ANDREWS AND PERCIVAL, MR. CRAIG, MR. DISHONG, MR. WILEY, MISS ROBINSON, MISS McCUTCHEON, MR. LINDSLEY, MR. MOORE, MR. FOLEY, AND DEPARTMENT ASSISTANTS

101. Paragraph Writing: Description and Narration. Two credit hours. Either semester. All instructors.

Text: Scott and Denney's Paragraph Writing, and Duncan, Beck and Graves's Specimens of Prose Composition.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session.

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisite, English 101-104, 105. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisite, English 101-104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

108. Advanced Composition. Two credit hours. Second semester. Prerequisite, English 101-104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Text-book: Greenough and Kittredge's Words and Their Ways in English Speech.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves, Mr. Andrews.

Second semester: Mr. Cooper, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant and Poe; of Hawthorne, Emerson, Whittier, Longfellow and Lowell; and of Walt Whitman; with a brief survey of recent literature.

145. Nineteenth Century Prose. Three credit hours. First semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Coleridge, Lamb, Landor, DeQuincy, Hazlitt and Carlyle.

146. Nineteenth Century Prose. Three credit hours. Second semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

141. Nineteenth Century Poetry. Three credit hours. First semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Wordsworth, Shelley, Keats, and their contemporaries.

142. Nineteenth Century Poetry. Three credit hours. Second semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris and Meredith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

137. Dr. Johnson and His Circle. Three credit hours. First semester. Prerequisite, six hours in English. Mr. Percival.

A study, through Boswell, of the life, character and opinions of Dr. Johnson and of his relation to the political, social and literary tendencies of his time. Reading in Boswell, Goldsmith, Sheridan, Garrick, Reynolds, Ossian, Mme. D'Arblay's Diary, Chesterfield's Letters, Walpole's Letters.

136. Eighteenth Century Poetry. Three credit hours. Second semester. Prerequisite, six hours in English. Mr. Percival.

After some consideration of the classical poetry of Pope and his contemporaries, the development of romantic poetry is

studied in the works of Thomson, Gray, Collins, Burns, Goldsmith, Cowper, Blake, Crabbe and others.

157. Versification. Three credit hours. First semester. This course is limited to thirty members. Open only to juniors and seniors. Special permission necessary. The course should be preceded by a year-course in poetry. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

159. Milton and His Contemporaries. Two credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Andrews.

The belles-lettres of the Puritan Revolution.

160. The Age of Dryden. Two credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Andrews.

167. Shakespeare: Histories and Tragedies. Three credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Denney.

168. Shakespeare: Comedies and Romances. Three credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Denney.

***175-176. American Literature.** Two credit hours. The year. Prerequisite, ten hours in English. Mr. Taylor.

Not open to those who have credit for English 133.

181. The Teaching of English. Two credit hours. First semester. Prerequisite, ten hours in English. Mr. Denney.

PUBLIC SPEAKING

101. Public Speaking. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Lindsley.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

102. Debating. Two credit hours. Second semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Lindsley.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

*Not given in 1917-1918.

107-108. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, English 104. Mr. Ketcham.

114. Extempore Speaking. Two credit hours. Second semester. Prerequisite, Public Speaking 102. Mr. Lindsley.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

121-122. Masters of Public Address. Two credit hours. The year. May be taken with Public Speaking 101 and 102, but may not precede them. Given biennially. Mr. Ketcham.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment, and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry, Webster, Clay, Calhoun, Lincoln, Beecher and Phillips. Lectures, readings and reports.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisite, Public Speaking 101,102. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominating speeches; after dinner speaking; discussions of current events; political, business and social addresses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***151-152. Special Problems in the Theory of Public Speaking.** Two credit hours. The year. Prerequisite, Public Speaking 101-102 and four additional credit hours in public speaking. Given biennially. Mr. Ketcham.

The sources of human conduct in their relation to formal public addresses. The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals and aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

*Not given in 1917-1918.

FOR GRADUATES

- 201. History of the Short Narrative in English.
- 202. The Lyric.
- 204. The College Teaching of English.
- 205. History of Critical Theory.
- 206. Problems in the Drama.
- 207. The Later Novel.
- 208. The Later Poetry.
- 209. English and Scottish Popular Ballads.
- *210. English Usage.
- 212. The Celtic Renaissance.
- 213. The Technique of the Modern Drama.
- 214. The Technique of the Drama.
- 215-216. Studies in Seventeenth Century Literature.
- 217-218. Studies in Eighteenth Century Literature.
- 219-220. Discussion of Dissertations.

For description of graduate courses in this department see the Bulletin of the Graduate School.

EUROPEAN HISTORY

Office, 204 University Hall

PROFESSORS SIEBERT, McNEAL AND PERKINS, MR. HARRIS

101. Medieval History. Three credit hours. First semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

102. Modern History from 1500 A. D. Three credit hours. Second semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third or fourth year students. Mr. Perkins, Mr. Harris.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

*Not given in 1917-1918.

105. History of Greece. Three credit hours. First semester. No prerequisite for second, third or fourth year students. Mr. McNeal.

106. History of Rome. Three credit hours. Second semester. No prerequisite for second, third or fourth year students. Mr. McNeal.

119-120. History of Germany. Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

***121-122. History of France.** Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

127-128. Medieval and Modern European History. Three credit hours. The year. Not open to students who have had European History 101, 102. Not open to first and second year students.

This course is primarily for teachers but is not a course in the teaching of European History.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107-108. Medieval Civilization. Two credit hours. The year. Prerequisite, European History 101, 102. Mr. McNeal.

Advanced students from other departments admitted without this prerequisite on consent of instructor.

First semester, the culture produced by feudal society; second semester, the culture produced by the church.

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisite, European History 101, 102. Mr. Siebert.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the

*Not given in 1917-1918.

political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisite, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

123-124. Europe from 1815 to 1917. Three credit hours. The year. Prerequisite, European History 101, 102. Mr. Perkins.

The history of central and western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. History of the Church in Western Europe. Two credit hours. The year. Prerequisite, European History 101, 102. Advanced students from other departments admitted without the prerequisite. Mr. Harris.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert, Mr. Perkins.

This course will most naturally be taken as a continuation of American History 121 (Teachers' Course), the two semesters forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History 101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

FOR GRADUATES

201-202. Seminary in Medieval History.

203-204. Seminary in Modern European History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FARM CROPS

Office, 112 Townshend Hall

PROFESSOR PARK, ASSISTANT PROFESSOR WIGGANS AND
DEPARTMENT ASSISTANTS

101. Field Crop Production. Four credit hours. Either se-

mester. Prerequisite, Botany 101 or its equivalent, prerequisite or concurrent, Soils 152. Mr. Wiggans.

A study of the history, adaptation, distribution, and classification of the cereal crops, and the cultivation, harvesting, and marketing of the same throughout the great agricultural sections of the world, with especial attention given to Ohio conditions.

FORESTRY

Office, 101 Horticulture and Forestry Building

ASSISTANT PROFESSOR SCHERER, MR. PFLUEGER

101. Introduction to Forestry. Two credit hours. First semester. Lectures and field work. Mr. Scherer.

A general presentation of what trees are, how they live and grow, and what they do. A specific study of the trees and shrubs on the campus, in the city parks, the University woodlots and near-by woodlands.

FRENCH

(See Romance Languages)

GEOLOGY

Office, 104 Orton Hall

PROFESSOR BOWNOCKER, ASSISTANT PROFESSORS HILLS AND CARMAN, MR. VERWIEBE, MISS CLARA MARK, MR. COTTINGHAM

101-102. Physiography. Three credit hours. The year. Open to freshmen and sophomores only. Mr. Bownocker, Mr. Hills, Miss Mark, Mr. Cottingham.

Three field trips are made Saturdays in each semester, each trip taking the place of a recitation. During three months the Monday recitation is replaced by laboratory work.

Physiographic features of the earth's surface; the ocean, and the atmosphere. Recitations, lectures and assigned readings, illustrated with models and lantern views.

103. Inorganic Geology. Three credit hours. First semester. Mr. Bownocker.

Introductory course. Petrographical, structural and dynamical geology. Study of common minerals and rocks and

geological maps. The course is illustrated with lantern views, models, and museum materials.

104. Historical Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103. Mr. Carman.

A general course in paleontological and stratigraphical geology, illustrated by lantern views, maps and specimens. The development of organisms and the classification and distribution of geological formations, especially those of Ohio, are considered. After the first of April, some of the Friday lectures will be replaced by field trips on Saturdays.

Geology 101 or 103, and 104 are considered prerequisites for advanced work in physiography, historical or inorganic geology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Field Geology. Three to five credit hours. First semester. Prerequisite, Geology 101 or 103-104. Mr. Carman.

Lectures, assigned readings, field trips and laboratory work. Field trips generally on Saturdays while the weather permits, laboratory work for the remainder of the semester.

A study of the geological formations readily accessible from Columbus, and identification of fossils characteristic of different formations. This course is intended to acquaint the student with the ordinary methods of field investigation, and involves the collection and identification of specimens, the measurement of geological sections, and the preparation of a report describing the region studied. Occasionally, longer geological excursions will be arranged.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103 and 104. Mr. Hills.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned readings and map work. The second half, largely to field work and the preparation of reports, the field work being on Saturdays.

111. Physiography of Central Ohio. Three credit hours. First semester. Prerequisite, Geology 101-102, and 103-104, or 103-104 concurrent. Mr. Hills.

Three field trips each week while the weather permits; assigned reading and written reports during the winter.

Field and laboratory course.

116. Physiographic Geology. Three credit hours. First semester. Prerequisite, Geology 101-102 and 103-104. Mr. Hills.

Intensive study of physiographic principles, processes and agents, with an application to certain type regions of the United States. Occasional field trips.

175-176. The Teaching of Physiography. Two credit hours. The year. Prerequisite, Geology 101-102, 104, 106, and 111, or an equivalent. Mr. Hills.

Lectures, readings, conferences, and reports. Sources and selection of materials; use of maps, globes and other representative materials; the excursion; preparation of type studies; correlation of topics; and discussion of the general course, with other topics of practical importance to the teacher of physical geography.

FOR GRADUATES

201-202. Advanced Historical Geology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317-318 University Hall

PROFESSORS M. B. EVANS AND EISENLOHR, ASSISTANT PROFESSORS

THOMAS, BARROWS, LEWISOHN, BUSEY, AND KEIDEL, MR.

KOTZ, MR. REESE, AND DEPARTMENT ASSISTANTS

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic and practice courses. The linguistic and practice courses are intended primarily for students who desire to make direct professional use of the language. A student beginning German at the university is advised not to take the subject as a major study. For students who enter with two years of German and who desire to major in German the following outline course is recommended:

First year: 103-104.

Second year: 115-116 and 131-132 or 133-134.

Third year: 117-118 or 119-120, 175, and one literary course in the group Advanced Undergraduates and Graduates.

Fourth year: at least one literary course in the group Advanced Undergraduates and Graduates, 171-172, 173, 177-178.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 102 is given also during the first semester.

German 101 is given also during the second semester.

103. Intermediate German. Four credit hours. First semester. Prerequisite, German 101-102 or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose and a classical drama supplemented by discussions of syntax; prose composition.

German 103 is given also during the second semester.

104. Easy Classical Reading and Composition. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

German 104 is given also during the first semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, and sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year. Open only to freshmen with four entrance units in German. Mr. Busey, Mr. Kotz.

Modern and classical prose and verse. Oral and written practice.

115-116. Classical and Modern Writers. Three credit hours. The year. Mr. Keidel, Mr. Kotz.

Selections from the 18th and 19th century writers; written and oral exercises. To be conducted in German.

117-118. Schiller: Introduction to Life and Works. Two credit hours. The year. Miss Thomas.

First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Krieg.

119-120. Nineteenth Century Drama. Two credit hours. The year. Mr. Lewisohn, Mr. Keidel.

Selected dramas read and interpreted in class. The interpretation will take the form of simple lectures in German to be reproduced orally and in writing by the student. First semester: Selections from Kleist, Grillparzer, Hebbel, Ludwig. Second semester: Selections from Wildenbruch, Sudermann, Hauptmann, Fulda.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor. Miss Barrows, Mr. Reese.

133-134. Conversation. Two credit hours. The year. The class will meet four times a week. Little outside preparation required. Mr. Keidel, Mr. Reese.

German 115 to 134, not open to freshmen, require as prerequisite German 104 or its equivalent. German 115-116, offering a considerable amount of intensive oral and written work, is especially recommended for students desiring to take German as a major subject. German 117 to 124 are primarily reading courses. No student may elect more than two year-courses in the group 107 to 124. A combination of German 131-132 or 133-134 with one of the Courses 115 to 124 is advised.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: At least one year course in the group 107 to 124 or the equivalent.

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

151-152. Goethe: Introduction to Life and Works. Three credit hours. The year. Mr. Evans.

First semester: Selections from lyrics, early dramas and prose. Second semester: Faust.

***153-154. Survey of German Literature.** Three credit hours. The year. Mr. Evans.

Lectures, interpretation of selected texts and parallel readings. First semester: From the beginning to Lessing. Second semester: Classical period and nineteenth century.

*Not given in 1917-1918.

155-156. Lessing: Introduction to Life and Works. Two credit hours. The year. Mr. Eisenlohr.

First semester: Dramas. Second semester: Critical writings, to be conducted in German.

*157. Volkslied. Two credit hours. First semester. Mr. Eisenlohr.

Studies in the origin and growth of the German folksong with special reference to German life and culture. To be conducted in German.

*158. Volksbuecher, Maerchen, und Sagen. Two credit hours. Second semester. Mr. Eisenlohr.

Studies in popular and legendary literature. To be conducted in German.

159. Heine: Introduction to Life and Works. Two credit hours. First semester. Mr. Reese.

160. Heibel: Introduction to Life and Works. Two credit hours. Second semester. Mr. Reese.

161-162. Romantic Writers. Two credit hours. The year. Miss Thomas.

Lectures on the Romantic Movement with the reading of representative texts. First semester: Selections from Novalis, Tieck, Arnim. Second semester: Selections from Eichendorff, Uhland, Hoffman.

163-164. Nineteenth Century Lyric. Two credit hours. The year. Mr. Lewisohn.

The form and content of German lyric poetry will be studied through intensive analysis of lyrics selected from the works of Goethe, Heine, and the Romanticists, Lenau, Moericke, Geibel, Meyer, Storm, and Liliencron.

171-172. Advanced Prose Composition. Two credit hours. The year. Open only on consent of instructor. Mr. Eisenlohr.

173. The Teaching of German. Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports and practice teaching. Open only to seniors and graduate students.

*Not given in 1917-1918.

174. Grammar Review. Two credit hours. Second semester. Mr. Evans.

A detailed discussion of theoretical grammar from the standpoint of the high school teacher. Open only to seniors and graduate students.

175. Phonetics. Two credit hours. First semester. No prerequisites. Not open to first and second year students. Miss Barrows.

Speech sounds with special reference to German, French and English.

176. Interpretative Reading. Two credit hours. Second semester. Miss Barrows.

Practice in reading German; narrative and dramatic prose and verse. Not open to graduate students for credit.

177. Middle High German. Two credit hours. First semester. Mr. Busey.

Introductory course. Grammar and selected readings.

178. History of the German Language. Two credit hours. Second semester. Mr. Busey.

Lectures and illustrative readings, with special reference to the needs of those intending to teach.

FOR GRADUATES

201-202. Advanced Middle High German.

*203. Gothic.

*204. Old High German.

*207-208. The Literature of the Empire (1870-1895.)

209-210. Franz Grillparzer.

*212. Methodology.

214. Experimental Phonetics.*

215-216. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year.

*Not given in 1917-1918.

107. Lysias and Plato. Three credit hours. First semester. Prerequisite, Greek 125-126.

Eight orations; with studies in Attic Procedure. Plato: Apology.

108. Plato and Euripides. Three credit hours. Second semester. Prerequisite, Greek 107.

Plato: Crito and Phaedo. Euripides, one play.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities.

123-124. Life and Literature of the Greeks. Two credit hours. The year. No prerequisite. Lectures on private life; on epic, lyric and dramatic poetry; on the historians, the philosophers and orators.

***127-128. Proseminary in Greek.** Two credit hours. The year. Elective. Prerequisites, one year of elementary Greek, and the equivalent of at least four semester courses of college Greek. Mr. Bolling.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Thucydides and Demosthenes. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

Thucydides: Book I or Book VII. Demosthenes: Olynthiacs.

110. Demosthenes and Theocritus. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

Demosthenes: Philippics. Theocritus: Selections.

111. Attic Drama. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

Euripides: Alcestis. Sophocles: Oedipus Tyrannus, with lectures on scenic antiquities.

112. Attic Drama. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

Continuation of Greek 111, two plays.

113. Epic Poetry and Aristophanes. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

Epic Poetry: Selections. Aristophanes: The Birds.

*Not given in 1917-1918.

114. Aristophanes and Post-Classical Greek. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling. Aristophanes: *The Clouds*. Post-Classical Greek: Lucian.

119. Readings in Greek Philosophy. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

120. Studies in New Testament Greek. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

121-122. Historical Greek Grammar. Two to four credit hours, according to the needs of applicants. The year. Mr. Bolling.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not pre-suppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

Courses 115-116, 121-122, 123-124, are planned to meet the needs of students who have no knowledge of Greek.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 100A Hayes Hall

PROFESSOR ANDERSON

101-102. History of Education. Three credit hours. The year. Prerequisite, one year's work in European history, philosophy or psychology. Mr. Anderson.

Text: Graves's *A History of Education* (three volumes).

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102 and Philosophy 151-152. Mr. Anderson.

105-106. Educational Classics. Two credit hours. The year. Prerequisite, History of Education 101-102 and Psychology 101-102. Mr. Anderson.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel and Spencer. Reports and conferences.

107-108. Comparative Education. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England and the United States.

109-110. History of Education in the United States. Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

112. History of Industrial Education. Two credit hours. Second semester. Prerequisite, History of Education 101-102 or equivalent. Open to seniors and graduates only. Mr. Anderson.

FOR GRADUATES

201-202. Seminary in the History of Education.

203-204. Seminary in Educational Philosophy.

206. A Special Survey of Source Materials and of General Literature in the Field of the History of Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 120 Home Economics Building

PROFESSOR WHITE, ASSISTANT PROFESSORS VAN METER AND HATHAWAY, MISS TUCKER, MRS. WALKER, MISS SKINNER, MISS LINDER, MRS. ADAMS AND DEPARTMENT ASSISTANTS

101-102. Foods. Five credit hours. The year. Two lectures, one quiz and two laboratory periods each week. Prerequisite, Chemistry 106 or 110. Miss White, Miss Skinner, Miss McGuire.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost and value of the nutrients in the various food materials.

104. Sanitation. Three credit hours. Either semester. Three lectures each week. Prerequisite or concurrent, Bacteriology 107. Miss Linder.

Location and construction of the house, water supply, plumbing, heating, ventilating and lighting. Interdependence of home and public agencies in securing sanitation and hygiene. Special attention is given to emergencies, first aid to the injured, and home nursing.

111-112. Textiles. Two credit hours. The year. One lecture and one laboratory period each week. Prerequisite or concurrent, Art 119. Mrs. Walker, Miss Tucker, Miss Miller.

The study of fibres and fabrics from an historic, economic and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs, and a comparison with commercially prepared articles.

Students having had previous work should consult with the instructor.

113. Dress. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Home Economics 111-112 and Art 121 prerequisite or concurrent. Miss Hathaway, Miss Miller.

The careful selection and combination of materials, the drafting of patterns, and the designing and making of a simple dress.

116. Dress. Three credit hours. Second semester. One lecture and two laboratory periods each week. Miss Hathaway, Miss Miller.

Continuation and amplification of Home Economics 113.

Outline of history of costume and continuation of the study of selection and combination of materials in their application to dress.

The lecture may be taken as a one-hour course without the laboratory.

118. The House. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisites, Art 131, Home Economics 112. Home Economics 104, Economics 101, Art 141, either prerequisite or concurrent. Miss Tucker.

A study of the evolution of the house and the principles underlying house arrangement, furnishing and decoration.

119. The House. Three credit hours. Either semester. Three lectures each week. Continuation of 118. Prerequisites,

Economics 102, Art 141, Home Economics 102, 118, 104 or 110. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

121. Food Problems. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisites, Chemistry 106 or 110, Home Economics 101-102 and consent of the instructor. Miss Linder, Miss Skinner.

Problems of markets, fuels, equipment and labor involved in selection, purchase, preparation and service of food.

108. Teaching of Home Economics. Two credit hours. Second semester. Two lectures each week. Prerequisites, Home Economics 101-102, 111-112, Psychology 101. Miss Van Meter, Miss Hathaway, Mrs. Adams.

This course is designed for students intending to teach Home Economics. Survey of Home Economics, examination of courses of study, lesson plans and study of various types of schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Proseminary. Two to five credit hours. First semester. One lecture each week. Prerequisite, eighteen hours of required home economics work. Miss Van Meter.

Readings and reports on home economics topics. Problems assigned for individual research.

106. Proseminary. Two to five credit hours. Second semester. One lecture each week. Continuation of Home Economics 105. Prerequisite, Home Economics 105 and consent of the instructor. Miss Van Meter.

Special research continued. Reports and conferences.

110. Dietetics. Four credit hours. Either semester. Two lectures and two laboratory periods each week. Prerequisites, Home Economics 101-102, Physiology 101-102, Agricultural Chemistry 123-124. Miss Skinner.

A study of the chemical, physiological and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Translation

of standard dietaries into food materials and some exercise in making dietary studies and in preparing food for the sick.

FOR GRADUATES

201-202. Research Course.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HORTICULTURE

Office, 118 Horticulture and Forestry Building

PROFESSORS PADDOCK AND DAVIS, ASSISTANT PROFESSOR ELWOOD,
PROFESSOR TAYLOR (Non-Resident)

101. Principles of Horticulture. Four credit hours. First semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if the student has already passed Horticulture 118. Mr. Davis.

A study of plant growth with special reference to orchard, garden, greenhouse and nursery practice. The methods of plant propagation are studied in detail.

120. Small Fruits and Grapes. Four credit hours. Second semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if Horticulture 118 has been passed. Prerequisite, Horticulture 101. Mr. Davis.

History, botany, geography, site and soil for plantation, planting, cultural practices, harvesting, marketing and cost of accounting.

156. Landscape Architecture. Two credit hours. Second semester. Mr. Elwood.

A general study of the underlying principles of landscape architecture. This course is open to the general student-body and is supplemented by discussions from outside lecturers, who have made a special study of different phases of this profession. The practical application of the principles of landscape archi-

ture will be covered as they relate to the development of public and private properties including farms, country estates, gardens and parks.

INDUSTRIAL ARTS

(See Shopwork)

ITALIAN

(See Romance Languages)

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS DERBY, HODGMAN AND ELDEN, MR. DUNLAP

147. **Elementary Latin.** Four credit hours. First semester. Grammar and exercises. This course is offered to students who have not studied Latin.

148. **Elementary Latin.** Four credit hours. Second semester. Prerequisite, Latin 147.

Caesar, four books and exercises.

149. **Cicero, Orations.** Four credit hours. First semester. Prerequisite, Latin 147-148 or their equivalent.

150. **Vergil, Aeneid.** Four credit hours. Second semester. Prerequisite, Latin 147-149 or their equivalent.

101. **Cicero, Livy, Horace.** Four credit hours. First semester. Prerequisite, four units of preparatory Latin. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Cicero: *De Senectute* and *De Amicitia*; or Livy; Horace: *Odes*.

102. **Horace, Ovid, Livy, Sallust.** Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Horace: *Odes*; or Ovid: *Metamorphoses*; Livy or Sallust, or Prose Composition.

103. Pliny or Cicero; Catullus or Tacitus. Three credit hours. First semester. Prerequisite, Latin 101-102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: Selected letters. Catullus or Tacitus.

104. Latin Comedy. Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. Roman Satire. Two credit hours. First semester. Prerequisite, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

106. The Roman Novel. Two credit hours. Second semester. Prerequisite, Latin 101-104. Mr. Elden.

Petronius; Seneca; Selections.

***107-108. Roman Private Life.** One credit hour. The year. Prerequisites, Latin 101, 102. Mr. Derby.

111-112. Roman and Comparative Literature. One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany and England.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***109-110. Roman Art and Archaeology.** One or two credit hours. The year. Mr. Derby.

The course is open to undergraduates excepting freshmen, and to graduates.

The development of the arts and crafts in early Italy, and especially of Roman architecture, sculpture, wall decoration, mosaic, gems and pottery. It is open not only to students of Latin, but also to other students who are interested in the subject.

113-114. Proseminary. Three credit hours. The year. Prerequisite, Latin 101-104. Mr. Elden.

*Not given in 1917-1918.

115-116. Latin Prose Composition. Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. Advanced Latin Composition. One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman.

Translation of English narrative and study of Latin idiom.

121. Roman Prose Authors. Two credit hours. First semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Sounds and inflections. Pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Elden.

Syntax. Lectures on the problems connected with the origin and development of certain constructions in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes, and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned readings on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of textbooks; preparation of lessons; conduct of recitations; equipment, bibliography of books of reference, periodicals, etc.; illustrative exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

130. Readings from Latin Authors on Education; and Practice in Reading at Sight. Two credit hours. Second semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Selections from Cicero, Quintilian, and other authors touching on education; together with instruction and practice in reading at sight.

***131-132. Roman Public Life.** One or two credit hours. The year. Prerequisite, Latin 103-104 or European History 106. Mr. Dunlap.

A brief survey of the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

FOR GRADUATES

201-202. Roman Religion.

203-204. Medieval Latin.

***207-208. Seminary.**

213-214. Elements of Epigraphy and Palaeography.

215-216. Roman Antiquities and Archaeology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

MANUAL TRAINING

Office, 212 Shop Building

PROFESSOR USRY

111. Teaching of Manual Training. Three credit hours. First semester. Manual Training, fourth year.

*Not given in 1917-1918.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up its strength. Point of view in industrial and vocational education; the part-time, co-operative, and trade school; night and continuation schools.

112. Materials, Methods, and Equipment. Three credit hours. Second semester. Manual Training, fourth year.

Organization, equipment and its care; supplies, courses of study, methods of presentation of subject, general procedure.

117-118. Constructive Design. Two credit hours. The year. Manual Training, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of material to project. These problems will cover work in the upper elementary grades and the secondary school.

121-122. Handwork for Supervisors. Two credit hours. The year. These courses should not be taken before the third year. Art 119, 131, 141, prerequisite or concurrent.

For elementary school supervisors of drawing, home economics, and manual training, suggesting means of correlating these subjects with the elementary school subjects.

Work in basketry, weaving, elementary woodwork, clay and various other mediums of expression is made use of in suggesting the correlation.

Assigned readings and discussions along with the construction work.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. Special Problems in Manual Training. Two credit hours. Either semester. For superintendents and principals. Mr. Usry.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, costs, selection of teachers, salaries, and ways to help the teacher in service. Open to seniors or

graduates, or to men of experience acceptable to the instructor.

For shopwork courses in Manual Training see Shopwork, page 103.

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOORD, SWARTZEL, KUHN, RASOR
AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT
PROFESSORS PRESTON, BAREIS, WEST, MISS RICKARD

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German and Italian by the beginning of the junior year, and to take some courses in philosophy, particularly logic, in the junior and senior years.

121. College Algebra and Trigonometry. Three credit hours. First semester. Two recitations and one two-hour problem period. Mr. Swartzel, Mr. Arnold, Mr. West.

122. Plane Trigonometry and Analytical Geometry. Three credit hours. Second semester. Two recitations and one two-hour problem period. Mr. Swartzel, Mr. Arnold, Mr. West.

125-126. History of Elementary Mathematics. Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. Analytical Geometry and Calculus. Three credit hours. The year. Prerequisites, Mathematics 122 or 132. Mr. Kuhn.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisite, entrance algebra and geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122, or 132. Mr. Bohannon, Mr. McCoord, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: Differential and Integral Calculus.

163-164. Plane and Solid Analytical Geometry. Three credit hours. The year. Miss Bareis.

165-166. Advanced Calculus. Three credit hours. The year. Mr. Morris.

167-168. Differential Equations. Three credit hours. The year. Mr. Bonhannan.

***171-172. Projective Geometry.** Three credit hours. The year.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

186. The Teaching of Mathematics. Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions and practice teaching.

FOR GRADUATES

201-202. Theory of Functions of a Complex Variable.

203. Fourier's Series and Spherical Harmonics.

204. Vector Analysis and its Applications.

205-206. Calculus of Variations.

207. History of Mathematics.

***209-210. Theory of Statistics.**

*Not given in 1917-1918.

- 211-212. Groups.
- 213-214. Differential Geometry.
- 215-216. Functions of a Real Variable.
- 217-218. Infinite Series and Products.
- 219-220. Theory of Numbers.
- 221-222. Theory of Invariants.

For description of graduate courses in this department see the Bulletin of the Graduate School.

MILITARY SCIENCE AND TACTICS

Office, 104 Hayes Hall

MAJOR CONVERSE, U. S. A., CAPTAIN TILFORD, U. S. A., LIEUTENANT SHERRARD, U. S. A., SERGEANTS CLARK, ARMSTRONG, PETERS, AND MADDEN, MR. BRUDER

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees, therefore, requires all male students, both special and regular, unless excused by the Military and Gymnasium Board, to drill during two years. This work is under three commissioned officers of the regular army, detailed for the purpose. The Military Department is open during five days each week throughout the year.

1. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring) military drill; four months, three hours each week (winter) of class-room instruction in drill regulations. Target practice at any open hour during the afternoon of the winter months, at 100, 200, and 300 yards. Lecture, one hour each week by the President, upon topics of common interest to the student body.

2. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring), in extended order and guard duty. Four months, three hours each week (winter) of class-room instruction in articles of war, guard manual, and field service regulations. Target practice, at any open hour of the afternoon of the winter months, at 500, 600, and 800 yards.

PHILOSOPHY

Office, 321 University Hall

PROFESSORS LEIGHTON AND DAVIES, ASSISTANT PROFESSOR CHANDLER

101. **Introduction to Philosophy.** Three credit hours. Either

semester. Open to first year students. Mr. Leighton, Mr. Davies, Mr. Chandler.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state and religion.

102. Introductory Logic. Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Davies, Mr. Chandler.

A practice course in the methods of correct thinking.

105-106. Elementary Ethics. Three credit hours. The year. Not open to first year students. Mr. Davies.

An introduction to the study of the moral life as it appears in the individual and society.

115-116. Esthetics. Two credit hours. The year. Not open to first year students. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

151. History of Ancient and Medieval Philosophy. Three credit hours. First semester. Not open to first year students. Mr. Davies, Mr. Chandler.

The development of Greek philosophy; early Christian philosophy, the medieval schools.

152. History of Modern Philosophy. Three credit hours. Second semester. Not open to first year students. Mr. Leighton, Mr. Davies.

The development of modern philosophic thought from Francis Bacon and Descartes to Charles Darwin and Herbert Spencer.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

119. Philosophy of Religion. Three credit hours. First semester. Prerequisite, one year's work in philosophy, psychology or history of religion. Mr. Leighton.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

***121-122. Metaphysics.** Three credit hours. The year. Prerequisites, at least one year's work in philosophy and in psychology or a natural science. Mr. Leighton.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality and theism.

123-124. Representative Ancient Philosophers. Three credit hours. Prerequisite, one year in philosophy and one year in a related subject. The year. Mr. Chandler.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

***125-126. Representative Modern Philosophers.** Three credit hours. Prerequisite, one year in philosophy and one year in a related subject. The year. Mr. Chandler.

Selected works of Leibniz, Hume, Kant and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

***134. Political and Social Philosophy.** Three credit hours. Second semester. Prerequisite, one year in philosophy or psychology, and one year in sociology, political science or history. Mr. Leighton.

The ethical values and aims involved in social institutions and their evolution, with especial reference to the state, the family, economic activities, and education; an examination of the ethical and metaphysical problems involved in the relation of the individual to society, and the philosophy of history.

142. The Main Currents in Contemporary Philosophy. Three credit hours. Second semester. Prerequisites, Philosophy 101, 105-106, 151 or 152. Mr. Leighton.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science and social movements.

*Not given in 1917-1918.

FOR GRADUATES

201-202. Seminary in Philosophy.

207-208. Contemporary Philosophical Issues.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION

MEN

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE AND CASTLEMAN, ASSISTANT PROFESSOR NICHOLS, MR. OHLSON, MR. MARSH, MR. TRAUTMAN

Students in the College of Education may take courses in physical education as a minor—twelve semester hours, in addition to the required courses 101-102 (men) or 131-132, 133, 134 (women)—on the approval, in each case, of the Head of the Department of Physical Education and the Dean of the College.

Juniors and seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than six semester hours. In each case the approval of the Head of the Department and the Dean of the College of Education is necessary.

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of all first year students in this college. During the first semester the course consists of one lecture on personal hygiene and one period of active physical exercise each week.

Personal Hygiene: Lectures and quizzes on the cause, prevention, and hygienic treatments of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of the student.

Physical Exercise in Class: A graded course of free-hand exercises, with light hand apparatus for the relief and correction of slight bodily defects, improper carriage; graded progressive exercises to promote muscular tone, organic vigor, bodily skill; class dancing, gymnastic and athletic games and contests.

107. Organization and Administration of Physical Education in Secondary Schools. Two credit hours. First semester. Elective. Mr. St. John, Mr. Wilce, Mr. Castleman.

Consideration of problems of organization for general intramural physical activity. Organization, administration, and control of competitive athletics.

110. Theory of Physical Education. Two credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

112. Principles of Coaching. Two credit hours. Second semester. Mr. St. John, Mr. Wilce, Mr. Castleman.

Instruction in the organization, conduct and coaching theory and practice of competitive athletic games, football, basketball, baseball and track.

Prerequisite, Physical Education 110. Students may satisfy prerequisite requirement in 1917 by taking 110 and 112 during the same semester.

120. Anthropometry and Physical Diagnosis. Two credit hours. Second semester. Elective. Prerequisite, Physiology 101-102. Mr. Castleman, Mr. Nichols.

Theory of taking and keeping records of physical history of students. Anthropometric measurements. Preliminary examination of eye, ear, nose, throat, lungs, heart, back, feet, with interpretation of knowledge obtained.

122. Teaching of Physical Education. Two credit hours. Second semester. Elective. Prerequisites, Physiology 101-102, Psychology 101-102, and previous satisfactory physical training. Mr. Nichols, Mr. Marsh.

One hour theory of teaching and two hours practice of gymnastics, calisthenics, and general floor work and handling of squads.

125. Hygiene and First Aid. Two credit hours. First semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

A study of the basic principles of health and their application in personal hygiene with particular reference to physical education. Principles and methods of first aid, emphasizing conditions arising in connection with physical education.

The above courses are open to third and fourth year students on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

WOMEN

Office, The Gymnasium

ASSISTANT PROFESSOR MEYER, MISS HAMMETT

131-132. Physical Education. One credit hour. The year. Four hours each week. Required of all women students during the first year of attendance at the University.

Lectures on personal hygiene.

Gymnasium exercises, elementary Swedish gymnastics, calisthenics, drills with wands, Indian clubs, etc. Folk dances, technique of aesthetic dancing, and gymnastic games.

133-134. Physical Education. One credit hour. The year. Four hours each week for second year students; required of all women students.

Lectures on principles of physical education.

Gymnasium exercises, a continuation of Physical Education 131-132.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Prerequisite, Physiology 101-102. Two lectures, three hours' practice each week. Miss Meyer.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Prerequisite, Physiology 101-102. Two lectures and three hours' practice each week. Miss Meyer.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

NOTE: The above courses are open only to juniors and seniors on approval of the Department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing courses 135 and 136 should have had courses in anatomy, physiology, psychology and history of education.

Physical Education 125 for men is also open to women who desire to minor in Physical Education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARTHART, BLAKE, BARNETT AND SHEARD,
ASSISTANT PROFESSOR ALPHEUS W. SMITH, MR. HEIL, MR.
WOODBURY, MR. ALVA W. SMITH, AND
DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures and laboratory. A non-mathematical course for students who have no entrance credit in physics. Mr. Earhart.

105-106. General Physics. Four credit hours. The year. Prerequisite, entrance credit in physics. Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Smith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Smith.

This course alternates with Physics 143-144.

143-144. Advanced Light and Electricity. Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106, Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism, Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. Proseminary in Physics. One credit hour. The year. Prerequisite, two years of college work in physics or one year in physics and one in mathematics or chemistry. Mr. Cole.

***147. Molecular Physics and Heat.** Three credit hours. First semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128.

*Not given in 1917-1918.

***148. Conduction of Electricity Through Gases and Radioactivity.** Three credit hours. Second semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128.

This course alternates with Physics 143-144.

***169-170. Theory of Light.** Two credit hours. The year. Prerequisite, Physics 105-106 and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

FOR GRADUATES

201-202. Research Laboratory.

***203-204. Theoretical Mechanics.**

***205-206. Thermodynamics and Electrolytic Conduction.**

207-208. Theory of Electricity and Magnetism.

***211-212. Theory of Oscillations with Applications to Wireless Telegraphy.**

***213-214. Conduction of Electricity Through Gases and Radioactivity.**

215-216. Electromagnetic Theory.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

Office, 104 Biological Hall

PROFESSORS BROOKS AND BLEILE, ASSISTANT PROFESSORS SEYMOUR AND McPEEK, MR. DURRANT, MR. REED AND
DEPARTMENT ASSISTANTS

101-102. Physiology. Three credit hours. The year. Not open to freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant, Mr. Reed.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including

*Not given in 1917-1918.

demonstrations in circulation, digestion, respiration, gross and minute anatomy, reflex actions, and other simple phenomena of living organisms.

104. Chemical Physiology. Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Bleile.

A laboratory course with lectures and recitations. The course includes laboratory study of foods, digestion, secretions, excretions and blood, with a short period devoted to urinalysis.

106. Chemical Physiology. Five credit hours. Second semester. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the physiology of the body fluids, foods, digestion, absorption, excretion, and metabolism.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations and assigned readings. The content of the course varies from year to year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation and secretion.

111-112. Physiological Laboratory. Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

FOR GRADUATES

201-202. Advanced Physiology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 200 University Hall

PROFESSORS SPENCER AND COKER

133-134. Government in the United States. Three credit hours. The year. Mr. Spencer, Mr. Coker.

A study of the organization, powers and practical workings of government in the United States—national, state and local, also of non-governmental political agencies such as parties. The first semester will be devoted to the federal government, the second semester to state and local government. The study will include at the outset a general survey of the field of political science. Not open to freshmen. It is strongly recommended that it be preceded by a year's work in European or American history.

Political Science 133 is given also during the second semester.

102. The Governments of Europe. Three credit hours. First semester. Prerequisite, Political Science 133-134. Mr. Spencer.

A comparative study of the principal countries of Europe, with particular attention to characteristic institutions; the English cabinet system; federal organization in Germany and Switzerland; the problem of imperial organization.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 100C Hayes Hall

PROFESSOR —————, PROFESSOR TWISS, ASSISTANT PROFESSORS CLIFTON AND AIKIN

101. Principles of Education. Three credit hours. Either semester. Prerequisite, Psychology 101-102; History of Education 101-102. By special permission, the History of Education may be taken concurrently with the above course.

A review of educational theory and the principles underlying teaching.

104. Observation, Criticism, and Practice. Three credit hours. Either semester. Prerequisite, Principles and Practice of Education 101.

A study of the general and special method; observation and criticism of classroom work in high school. Practice in teaching, ten weeks.

105. Biological Principles in Education. Three credit hours. First semester. Prerequisite, Physiology 101 or equivalent.

This course is for undergraduate students, but by additional prescribed readings and reports may be applied as graduate credit. This course investigates the principles of education from the standpoint of biology, anthropology, physiology and hygiene.

106. Plant, Animal, and Human Behavior. Three credit hours. Second semester. Prerequisite, Physiology 101 or 105, or a preparation adequate to do the work of the course.

A study of behavior in plants, animals and man in search for guiding educational principles.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. Advanced Principles of Education. Three credit hours. The year. Prerequisites, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

PSYCHOLOGY

Office, 403 University Hall

PROFESSOR ARPS, ASSISTANT PROFESSORS PINTNER AND WEISS,
MR. EVANS, MR. CRANE, MR. BRIDGES, MISS GOUDGE, MR.
CULLER, MR. MUDGE, AND DEPARTMENT ASSISTANTS

101-102. Elementary Psychology. Introductory course. Three credit hours. The year. All instructors.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

A limited number of beginning students in psychology may take 103-104 as equivalent to 101-102.

103-104. Elementary Psychology. Three credit hours. The year. Two lectures and one laboratory period each week. Mr. Weiss.

This course meets the same requirements as a prerequisite as Psychology 101-102. Designed for students who wish to perform some of the simpler psychological experiments in their elementary course.

The number of students admitted to this course is limited to forty.

107-108. Educational Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Pinter, Mr. Evans, Miss Goudge.

Psychology 107 is given also in the second semester.

Psychology 108 is given also in the first semester.

111. Experimental Psychology: Introduction. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 101-102. Mr. Weiss.

A systematic training course in the psychological methods as applied to the sense fields. Topics: vision, audition, the cutaneous, olfactory, gustatory, kinesthetic and organic senses.

112. Experimental Psychology: Advanced. Three credit hours. Second semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A systematic training course in the psychological methods as applied to the more complex processes. Topics: perception, memory, attention, illusions, association and reaction time.

115-116. Genetic Psychology and Child Study. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

Psychology 115 treats of the development of mind together with the laws and principles which govern this development in the child. Psychology 116 treats of the various problems of child study and the child mind which concern the home, school and society.

118. Perception and Behavior. Two credit hours. First semester. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on, the original nature of man, the function of the nervous system, and the interaction among individuals.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

This course is adapted to meet the needs of medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: nervous elements and their functions; end organs and their functions; cerebral functions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

127. Industrial Psychology. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Lectures, recitations, reports. Mr. Bridges.

The application of psychology to the following problems: vocational guidance, selection of industrial workers, industrial learning and training, the adaptation of technical to mental conditions, industrial monotony, fatigue, rest, and the length of the working day.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

114. Mental and Social Measurements. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Weiss.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education and the social sciences. Topics: standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

***119. Animal Psychology.** Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

It is desirable that students shall have had work in zoology or experimental psychology.

A survey of animal behavior from the lower to the higher forms with especial emphasis upon the development of tropisms and instinctive reactions and their relation to the learning process in human behavior. A few typical experiments will be studied in the laboratory.

*Not given in 1917-1918.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner, Mr. Bridges.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner, Mr. Bridges.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feeble-minded. The causes of the same. Lectures, recitations and clinics.

124. Psychopathology. Two credit hours. Second semester. Prerequisite, Psychology 121. Mr. Bridges.

The so-called borderland phenomena; sleep and dreams, psychopathology of every-day life, hypnosis and the hypnotic state, hysteria, psychasthenia, neurasthenia, and the constitutional psychopathic states. Considerable attention will be given to the various interpretations of these phenomena. Lectures, recitations and reports.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

126. Folk Psychology. Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The psychic factors involved in various group activities which apply to the problems of education, religion and social aims.

128. Psychology of Advertising. Two credit hours. First semester. Prerequisite, Psychology 103-104, or 101-102. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and

emotions to effective advertising. Lectures, reports and investigation of practical problems in the laboratory.

129-130. Advanced Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

This course is intended for students who desire a more detailed knowledge of the normal mental processes than is possible in an introductory course. A course fundamental to all fields of psychology and philosophy and to allied fields which involve human behavior. This course is mainly a consideration of the cognitive processes.

133-134. Mental Tests. Three credit hours. The year. Prerequisite, Psychology 112 or 107-108 or 121-122. Mr. Pintner.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

137-138. Psychology of Emotion and Volition. Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

A study of the various theories of feeling and emotion; the relation of the affective processes to the life of cognition; theories of volition; determinism; sources of action; diseases of the will and their relation to social problems.

139-140. History of Psychology. Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

The principal aim of this course is to trace modern psychology back to its historical antecedents. This will include a consideration of the early metaphysical and empirical tendencies, the development of the fundamental concepts of psychology, and a history of the most important psychological theories such as the theories of sensation, space perception, feeling and volition.

141-142. Minor Research. Two to four credit hours. The year. Prerequisite, at least twelve hours in psychology. Mr. Arps, Mr. Pintner, Mr. Weiss, Mr. Bridges.

Investigation of minor problems in the various fields of psychology.

147-148. **The Psychological Clinic.** One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pinter, Mr. Evans.

Practical work in the diagnosis of defective and exceptional children.

155. **The Treatment of Exceptional Children.** Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104, and permission of instructor. Not open to first and second year students. Mr. Evans.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children, both superior and inferior types. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual defects, moral eccentricities. Lectures, reports and practical work with children in the public schools.

151-152. **Criminal and Legal Psychology.** Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Crane.

A critical presentation of the evolution of the present day psychological conception of crime, with a study of the neurological basis of, and the nature of the stimuli to, anti-social behavior. There will be both a critical and experimental study of the psychological principles applied to the problems of testimony, those underlying recently advocated reforms in legal procedure, and the technique and reliability of suggested psychological methods for the detection of criminals.

FOR GRADUATES

201-202. **Major Research.**

203-204. **Seminary in Psychology.**

205-206. **Contemporary Psychological Literature.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 305 University Hall

PROFESSORS BOWEN, BRUCE AND INGRAHAM, ASSISTANT PROFESSORS HAMILTON, CHAPIN AND PEIRCE, MR. DITCHY, MR. MOORE, MR. CARDON, MR. DE BERRIZ, AND DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French except French 106. French 119-120 must be preceded by French 107, 109, and 110, or an equivalent.

The undergraduate courses offered in French, and to some extent in Spanish, beginning with third-year collegiate work, fall into two general groups: (1) literary, (2) linguistic and practical; so that students may emphasize one or both of these lines of study. For students who enter with two years of high school French and who desire to major in French the following outline course is recommended:

First year: French 103-104.

Second year: French 107 and 109-110.

Third year: French 108, 111-112 and 113-114 or 115-116.

Fourth year: French 117-118, 119-120 and 122.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar: Fraser and Squair's, or equivalent. Reader: Aldrich and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. All instructors.

Stress is laid first upon the acquisition of a correct pronunciation, after which the entire energy of the student is directed toward the attainment of a full and accurate reading knowledge of the language. Grammar and composition are made to contribute to this end. Sight reading is emphasized.

French 101 is given also during the second semester, and French 102 is given during the first semester.

103-104. Modern French Literature. Four credit hours. The year. Prerequisite, French 101-102 or an equivalent. Mr. Bruce, Mr. Hamilton, Mr. Chapin, Mr. Peirce, Mr. Ditchy, Mr. Moore, Mr. Cardon.

The work of the year deals with the following subjects: (1) Contes; (2) The novel (Balzac or Hugo); (3) Lyric poetry; (4) Romantic drama (Hugo). Prose composition with practice in speaking. Systematic attention given to syntax and idiom. Lectures supplement the work. Private reading required.

French 103 is given also during the second semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, French 103. Mr. Chapin.

A course of rapid reading introductory to the vocabulary of scientific literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107. Advanced Prose Composition. Two credit hours. First semester. Mr. Cardon.

Cameron's French Composition, followed by other selections. Dictation. Conversation. The course is conducted mainly in French.

108. History of French Literature. Two credit hours. Second semester. Lectures and illustrative readings. Mr. Cardon.

109. Seventeenth Century Drama: Moliere and Corneille. Three credit hours. First semester. Mr. Bowen, Mr. Bruce.

Lectures on the growth of French comedy and tragedy. Critical study of representative plays of Moliere, Regnard, and Corneille. Collateral reading. Assigned topics and reports.

110. Seventeenth Century Tragedy and Prose. Three credit hours. Second semester. Mr. Bowen, Mr. Bruce.

Representative dramas of Racine; Hachette's Theatre Choisi de Racine. Study of Descartes, Pascal, La Bruyere and others; Warren's Selections. Lectures, with collateral reading and reports.

111. Eighteenth Century Drama. Two credit hours. First semester. Prerequisite, French 109 and 110. Mr. Bruce.

Lectures on French comedy after Moliere, with work centering on Marivaux and Beaumarchais. Study of the drama of Voltaire. Collateral reading and reports.

112. Nineteenth Century Drama. Two credit hours. Second semester. Prerequisite, French 109 and 110. Mr. Bruce.

Tendencies of French drama during the nineteenth century, with special reference to Scribe, Augier, Dumas fils, and Sardou. Lectures, with collateral reading and reports.

113. Recent French Prose. Two credit hours. First semester. Given biennially, alternating with French 115. Mr. Bowen.

Rapid reading with lectures. Selections from the works of such writers as Bazin, Bourget, Loti, and Bordeaux.

114. Practice in Speaking and Writing French. Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 116. Mr. Cardon.

***115. Eighteenth Century Prose.** Two credit hours. First semester. Given biennially, alternating with French 113. Mr. Bruce or Mr. Bowen.

Selections from Voltaire (ed. Cohn and Woodward), Rousseau and others.

***116. Advanced Conversational Practice.** Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 114. Mr. Cardon.

119-120. Old and Middle French. Two credit hours. The year. Mr. Bowen.

Studies in old French (with emphasis on *la Chanson de Roland*) and in the language and writers of the sixteenth century. Special consideration of Montaigne.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Bowen.

Historical and critical survey of the methods of teaching French. The teacher's equipment. Class room aids. Special problems and difficulties in the teaching of French. Lectures; discussions; practice in conducting recitations.

ITALIAN

101-102. Elementary Italian. Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Students are advised to postpone the election of this course until they have completed French 101-102 or an equivalent. Mr. Guigou.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Italian Novel. Two credit hours. First semester. Prerequisite, Italian 101-102. Mr. Bruce.

Manzoni (*I Promessi Sposi*, and others). Lectures.

*Not given in 1917-1918.

104. Dante. Two credit hours. Second semester. Prerequisite, Italian 103. Mr. Bruce.

Selections from the *Inferno* and *Paradiso*. Lectures.

SPANISH

101-102. Elementary Spanish. Four credit hours. The year. Mr. Ingraham, Mr. Hamilton, Mr. Chapin, Mr. Ditchy, Mr. Moore, Mr. DeBerriz, and department assistants.

Grammar: Ingraham-Edgren's and Ingraham's *Victoria y Otros Cuentos*. Easy prose and plays. Composition and practice in speaking.

Spanish 101 is given also during the second semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Modern Spanish Literature. Four credit hours. The year. Prerequisite, Spanish 101-102 or an equivalent. Mr. Ingraham, Mr. Hamilton, Mr. Chapin.

The modern novel and drama. Lectures covering a survey of the literature. Composition and practice in speaking continued.

***105. Cervantes: *Don Quijote*.** Two credit hours. First semester. Prerequisite, Spanish 103-104. Given biennially, alternating with Spanish 107. Mr. Ingraham.

***106. Lope de Vega and Calderon.** Two credit hours. Second semester. Prerequisite, Spanish 105. Given biennially, alternating with Spanish 108. Mr. Ingraham.

107. The Pastoral Novel and the Romance of Roguery. Two credit hours. First semester. Prerequisite, Spanish 103-104. Given biennially, alternating with Spanish 105. Mr. Ingraham.

108. Contemporaries of Lope de Vega and Calderon. Two credit hours. Second semester. Prerequisite, Spanish 107. Given biennially, alternating with Spanish 106. Mr. Ingraham.

110. Commercial Reading and Correspondence. Four credit hours. Second semester. Prerequisite, Spanish 103. Mr. Chapin.

A course designed to familiarize students with the vocabulary of business and with the forms of Spanish commercial paper and correspondence.

*Not given in 1917-1918.

FOR GRADUATES

201-202. Introduction to Romance Philology.

203-204. Old Provençal.

205-206. History of the Literary Movement in France in the First Half of the Nineteenth Century.

207-208. Research in French Literature.

209-210. Research in Spanish Literature.

211-212. Old Spanish.

213. Nineteenth Century French Lyric.

215. Seminary in Moliere.

216. Seminary in Moliere and his Successors.

217-218. Seminary in French Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS

Office, 209 Hayes Hall

ASSISTANT PROFESSORS T. D. PHILLIPS AND FALCONER, MR. LANTIS

101. Farm Accounting. Two credit hours. Either semester. Mr. Phillips.

Lectures and practice work. The course deals with the general principles of accounting and their application to farm business. Systems of keeping farm records that are best adapted to different methods of farming are studied.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

110. Rural Community Life. Three credit hours. Second semester. Prerequisite, Economics 101 or Sociology 101.

Lectures and recitations on rural organizations and community life. The rural church, rural school, rural home, and farmers' organizations and their bearing upon country life are studied.

FOR GRADUATES

201-202. Research Work.

For description of graduate course in this department see the Bulletin of the Graduate School.

SCHOOL ADMINISTRATION

Office, 100B Hayes Hall

PROFESSOR BROWN

101. Public Education in the United States. Three credit hours. First semester. Three lectures each week and assigned readings. Open to advanced undergraduates. Mr. Brown, Mr. Clifton.

An introductory survey of American public education as the expression and promoter of democracy. School laws, regulations and decisions of Ohio.

102. State School Administration. Three credit hours. Second semester. Open to advanced undergraduates. Lectures and readings. Mr. Brown.

Federal and state policies. Forms of control. Revenue and appointment. The state and the teacher. The state and the child. The state and non-state education.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111. The Administration of Secondary Schools. Three credit hours. First semester. Mr. Brown, Mr. Clifton.

Historical forerunners of the high school, types of high schools, aims of secondary education, relation to higher and elementary education, high schools of the North-Central States, curricula and time schedules, college entrance requirements, buildings, equipment, texts, supplies, support and cost.

112. The Administration of Secondary Schools. Three credit hours. Second semester. Mr. Brown.

Retardation, elimination, overage, delinquency, student activities, grading, records, reports, hygiene, sanitation, health, preparation, selection, assignment, tenure and pay of teachers.

113. The Administration of Elementary Schools. Three credit hours. First semester. Lectures and readings. Mr. Brown.

Aims, organization and control, types of schools, curricula, schedules, texts, supplies, relation to secondary and vocational education, buildings, equipment, grounds, support and cost.

114. The Administration of Elementary Schools. Three credit hours. Second semester. Lectures and readings. Mr. Brown.

Retardation and elimination, individual differences, grading and promotion, efficiency tests and records, delinquents and defectives, social activities. Teacher: training, selection, promotion, tenure, salaries, pensions, organizations.

***115. Educational Statistics.** Two credit hours. First semester. Open to superintendents, principals and graduates of experience, by permission of instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. City School Administration. Three credit hours. Second semester. Open to superintendents, principals and graduates of experience, by permission of instructor in charge. Proseminary. Prerequisite, Psychology 101-102, and for graduate work Principles and Practice of Education 101-104. Mr. Brown.

Comparative studies and administrative principles applicable to them. Thesis on some problem involved.

FOR GRADUATES

201. Educational Surveys.

202. Educational Surveys.

For description of graduate courses in this department see the Bulletin of the Graduate School.

AGRICULTURAL EDUCATION

122. The Teaching of Agriculture in the High School. Two credit hours. Second semester.

The administrative phases of secondary agriculture, the application of the principles of pedagogy to the teaching of agriculture in the high school, and the organization of agricultural materials into secondary courses of study will constitute the essential features. Intended for superintendents, principals and teachers of secondary agriculture in the high schools of the state. Text-book: Bricker's "The Teaching of Agriculture in the High School."

*Not given in 1917-1918.

123-124. The Elements of General Agriculture. Three credit hours. The year.

This course is designed to furnish a general fund of knowledge of the science and art of agriculture as a basis for pedagogical study, and preparation to teach either elementary or secondary agriculture in the public schools of Ohio. It will also furnish an excellent basis for the further pursuit of the more specialized divisions of agriculture offered in the College of Agriculture. The work of the first semester will consist of plant studies, animal studies, and studies in farm management; and machine studies, soil studies, and studies of the conditions of plant growth will be considered during the second semester. The last topic will include work in the greenhouse, the demonstration field, and investigations of plant diseases and insect pests, together with remedial measures.

127. History of Agricultural Education. Two credit hours. First semester.

A survey of the rise and development of agricultural instruction in the United States. The land-grant colleges, the agricultural experiment stations, secondary and elementary school instruction, farmers' institutes, agricultural societies, the club movement, etc. Ohio agricultural educational institutions.

132. Teaching of Elementary Agriculture. Two credit hours. First semester.

This course is designed to meet the pedagogical requirements of township superintendents, rural teachers, and teachers in village elementary schools. The present status of agricultural instruction in the elementary schools, the arrangement of the materials of elementary agriculture into a course of study, the methods of presentation of the subject matter, and the organization and use of popular auxiliaries to public school instruction in agriculture will be considered.

SHOPWORK

Office, 125 Shop Building

PROFESSOR SANBORN, ASSOCIATE PROFESSOR KNIGHT, MR. CASE,
MR. BEEM, MR. FOUST, MR. DENMAN, AND DEPART-
MENT ASSISTANTS

105. **Foundry Work.** Two credit hours. Either semester. Manual Training, first year. Mr. Beem, Mr. Breckur.

113. **Cabinet Making.** Two credit hours. Either semester. Prerequisite, Shopwork 133. Manual Training, third year. Mr. Beem, Mr. Smith.

115. **Forging.** Two credit hours. Either semester. Manual Training, third year. Mr. Foust, Mr. Wright.

118. **Advanced Forging.** Two credit hours. Second semester. Prerequisite, Shopwork 115. Manual Training, fourth year. Mr. Foust.

119. **Machine Work.** Three credit hours. Either semester. Manual Training, third year. Mr. Knight, Mr. Case.

121. **Advanced Machine Work.** Three credit hours. Either semester. Prerequisite, Shopwork 119. Option, Manual Training, fourth year. Mr. Knight, Mr. Case.

123. **Advanced Machine Work.** Two credit hours. First semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

125. **Construction Work.** Two credit hours. Either semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

129-130. **Wood Turning and Pattern Making.** Three credit hours. The year. Prerequisite, Shopwork 133. Manual Training, second year. Mr. Beem, Mr. Smith.

131. **Advanced Cabinet Work.** Three credit hours. First semester. Prerequisite, Shopwork 113. Optional, Manual Training, fourth year. Mr. Beem, Mr. Smith.

133. **Elementary Woodwork.** Two credit hours. Second semester. Manual Training, first year. Mr. Beem, Mr. Smith.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN AND OSBORN, ASSOCIATE PROFESSOR HINE,
ASSISTANT PROFESSORS BARROWS, KRECKER AND METCALF,
MR. KOSTIR, AND DEPARTMENT ASSISTANTS

For those students desiring to receive a recommendation for the teaching of zoology in secondary schools the department suggests that in addition to the introductory course, Zoology 101-102, one or more of the following courses be taken: 107-108, Economic Entomology; 121-122, Invertebrate Morphology; 131-132, Evolution; 159-160, Animal Ecology.

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Lectures and laboratory. Mr. Osburn, Mr. Barrows, Mr. Kreckler, Mr. Kostir and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology, and to serve as a foundation for more advanced courses.

Zoology 101 is given also during the second semester.

121-122. Invertebrate Morphology. Three to five credit hours. The year. Prerequisite, Zoology 101-102. Mr. Kostir.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osburn, Mr. Kreckler.

The facts and theories of the origin, development, and distribution of animal life. The general order of treatment is: historical aspects, evidences, factors and modern theories. The relation of evolutionary doctrine to practical problems is emphasized.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year in biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year in biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory

courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

159-160. **Animal Ecology.** Three to five credit hours. The year. Prerequisite, Zoology 101-102, and one additional year of a biological science. Mr. Kreckler.

A study of animals in their habitats and of the factors involved. Field work, lectures and laboratory.

FOR GRADUATES

201-202. **Seminary in Zoology.**

223-224. **Invertebrate Embryology.**

241-242. **Research Work.**

247-248. **Invertebrate Zoology.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. **Economic Entomology.** Three credit hours. The year. Prerequisite, Zoology 101-102. Mr. Metcalf.

A systematic study of groups of insects, with special reference to injuries and beneficial species. A foundation is laid for special study in entomology. Preparation of collections, essays, life studies, and use of remedial measures, along with laboratory studies on general anatomy.

FOR GRADUATES

201-202. **Seminary in Entomology.**

241-242. **Research Work.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

GENERAL INFORMATION

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of thirty-five dollars is offered for the best essay on the principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the Head of the Department of American History.

APPOINTMENT COMMITTEE

In order to serve the schools of the state, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Secretary, Mr. L. E. Wolfe. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the committee.

FEES AND EXPENSES

All fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until fees are paid.

Incidental Fee—The fee for all students is fifteen dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of

these materials a deposit of ten dollars for each course requiring such supplies is made at the Bursar's office before the work is begun. All laboratory supplies are sold at the General Store Room, Chemistry Hall, to students at first cost to the University, and charged against the deposits. Any unused part of the deposit is refunded at the end of the semester.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

Cadet Uniform. The uniform with which the members of the regiment are required to provide themselves costs (without overcoat) about twelve dollars. It is quiet in pattern, and may be worn in place of civilian dress. New students are advised against buying second-hand uniforms unless they have been previously inspected and approved by the Commandant. Inspection has shown in many cases that second-hand uniforms were unfit to wear and certainly not worth the price asked for them. All such uniforms are subject to rejection by the Commandant. Students should not arrange for uniforms until so directed by the military authorities.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid on or before the last Friday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Text-books. Students should not purchase text-books until they are advised by the instructors of their respective classes.

EXPENSES PER YEAR

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost for the freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Incidental fee	\$ 30.00
Ohio Union	2.00
Gymnasium locker	4.00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	20.00
Cadet uniform, gloves and shirt	15.00
Books	15.00
Board—36 weeks at \$3.50 per week.....	126.00
Room rent, at \$8.00 per month.....	72.00
General expenses	100.00
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	\$384.00

The item of general expenses is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

In order to meet all the necessary expenses of registration, books, uniform, and other expenditures incident to securing a room and board, a student should come prepared to expend from sixty-five to seventy-five dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.

WOMEN STUDENTS

As far as possible women students should make arrangements for room and board in advance. An effort will be made to secure suitable accommodations in private residences for such as cannot be accommodated in Oxley Hall. Prospective women students should address Miss Caroline Breyfogle, Dean of Women, The Ohio State University, Columbus, Ohio.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$300 for the academic year and in addition all fees are remitted, except a diploma fee, for those students who receive degrees. At present there are such assistantships in Agricultural Chemistry, American History, Bacteriology, Botany, Chemistry, Economics, English, Geology, German, Mathematics, Physics, Psychology, Romance Languages, Zoology, and a few others in technical and professional colleges. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the Graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$250 with exemption from all fixed fees. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applications not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

TIME SCHEDULE

COLLEGES OF ARTS AND EDUCATION

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect, provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Departments of Instruction without first consulting the secretary of their college.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours per semester of the course.

KEY TO ABBREVIATIONS

- Bi.—Biological Building
- B. Z.—Botany and Zoology Building
- Br.—Brown Hall
- Ch.—Chemistry Hall
- Ha.—Hayes Hall
- H. E.—Home Economics Building
- H. F.—Horticulture and Forestry Building
- L.—Library
- Lo.—Lord Hall
- Obs.—Observatory
- O.—Orton Hall
- P.—Page Hall
- Pav.—Judging Pavilion
- Ph.—Physics Building
- R. L.—Robinson Laboratory
- S.—Shop Building
- T.—Townshend Hall
- U.—University Hall
- V. C.—Veterinary Clinic
- V. L.—Veterinary Laboratory
- L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

AGRICULTURAL CHEMISTRY AND SOILS

Agricultural Chemistry

Course No.	Hours	Time	Room	Instructor
—123	4	L., Tu., at 9	T. 205	Lyman
		Tu., at 2	T. 205	Phillips
		Q., Th., at 9	T. 205	Lyman
		Th., at 2	T. 205	Phillips
		Lab., M., W., 8 to 11	T. 210	Lyman
		M., W., 1 to 4	T. 210	Phillips

Soils

—152	5	L., M., W., at 8	T. 205	Vivian
		M., W., at 1	T. 205	Vivian
		Q., F., at 8	T. 205, 200, 204	
		F., at 1	T. 205, 200, 204	
		Lab., M., W., 8 to 11	T. 210	
		Tu., Th., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	
		Tu., Th., 1 to 4	T. 210	

AGRICULTURAL ENGINEERING

101—	4	M., Th., F., at 11	H. E. 200	Ramsower
		Lab., M., 1 to 4		
		Tu., 1 to 4		
		W., 1 to 4		
		F., 1 to 4		
—101	4	M., W., F., at 4	H. E. 321	Ramsower
		Lab., Tu., 8 to 11		
		W., 8 to 11		
		Th., 8 to 11		
		F., 8 to 11		

AMERICAN HISTORY

101—102	3	M., W., F., at 8	U. 205	Hockett
		M., W., F., at 8	U. 209	Schlesinger
		M., W., F., at 8	L. 107	Wittke
		M., W., F., at 9	U. 205	Hockett
		M., W., F., at 9	L. 107	Wood
		M., W., F., at 10	U. 209	Schlesinger
		M., W., F., at 10	L. 107	Wittke
		M., W., F., at 1	U. 205	Schlesinger
		M., W., F., at 1	U. 209	Wood
		M., W., F., at 1	L. 107	Wittke
		M., W., F., at 3	U. 205	Wood

AMERICAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 4	U. 205	Wood
101—		M., W., F., at 3	U. 209	Wittke
—101		M., W., F., at 3	U. 209	Wittke
102—101		M., W., F., at 2	U. 209	Wittke
103—104	3	M., W., F., at 8	L. 307	Wood
107—108	2	Tu., Th., at 10	U. 205	Hockett
109—110	2	Tu., Th., at 8	U. 205	Schlesinger
113—	3	M., W., F., at 2	U. 205	Schlesinger
—114	3	M., W., F., at 2	U. 205	Knight
115—116	3	M., W., F., at 10	U. 205	Hockett
119—	2	Tu., Th., at 3	L. 303	Hockett
121—	2	Tu., Th., at 9	U. 205	Knight
123—124	3	M., W., F., at 9	U. 209	Knight
—128	2	Tu., Th., at 3	U. 205	Hockett
—130	3	M., W., F., at 3	L. 303	Schlesinger
203—204	2	M., 4 to 6	L. 303	Knight
205—206	2	W., 4 to 6	L. 303	Knight

ANATOMY

101—102	3 to 5	L., W., at 1	Bio. 102	Baker
		Lab., W., Th., F., 1 to 4		
—102 (pre-med)		L., Tu., at 8	Bio. 100	Landacre
		Th., at 1	Bio. 102	Baker
		Lab., Tu., 9 to 11		
		Th., 8 to 11		
		Tu., 1 to 4		
		Th., 2 to 4		
		For 5 hrs., credit F., 1 to 4 additional		
103—104	3 to 5	L., Tu., at 1	Bio. 107	Landacre
		Lab., W., Th., F., 1 to 4		
105—106	3 to 5	To be arranged	Bio. 102	Baker
107—108	3 to 5	L., Tu., at 4	Bio. 102	Knouff
		Lab., M., Tu., 1 to 4		
109—110	3 to 5	To be arranged	Bio. 106	Landacre
111—112	1	M., at 4	Bio. 101	Landacre
113—114	3 to 5	To be arranged	Bio. 107	Landacre
121—	6	Tu., W., Th., F., 1 to 5	Park St. 410	Buck
—122	4	Tu., W., Th., 1 to 5	Park St. 410	Buck
125—	4	M., Tu., W., Th., F., 4 to 6	Park St. 409	Smith
—126	4	M., Tu., W., Th., F., 4 to 6	Park St. 409	Smith
127—	3	L., W., F., at 8	Park St. 410	Buck
		Lab., W., 9 to 12		
131—	3	To be arranged	Park St. 410	Buck
133—	6	L., M., W., F., at 8		
		M., at 1	Park St. 400	Landacre
		Lab., M., W., F., 9 to 12	Park St. 413	Warren

ANATOMY—Continued

Course No.	Hours	Time	Room	Instructor
—134	4	To be arranged		
—136	4	L., M., W., F., at 8 M., at 1	Park St. 400	Landacre
		Lab., M., W., F., 9 to 12 F., 1 to 5	Park St. 408, 413	Buck Warren
139—140	3	L., Tu., Th., at 8 Lab., Th., 9 to 12	Park St. 400 Park St. 413	Warren
—142	4	L., M., F., at 8 Lab., W., 1 to 5	Bio. 100	Knouff
143—	5	L., M., W., F., at 1 Lab., M., W., F., 2 to 4	Bio. 100	Knouff
145—	4	To be arranged		Landacre
149—150	3 to 5	To be arranged	Park St. 413	Warren
—152	3	To be arranged	Park St. 410	Buck
201—202	3 to 5	To be arranged		Landacre
203—204	5 to 10	To be arranged		

ANIMAL HUSBANDRY

103—104	4	M., W., F., at 10 Lab., Tu., 1 to 3	Pav. Pav.	Kays, Coffey
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ART

117—	3	To be arranged	Ha.	Robinson
119—	1	F., at 8	Ha. 204	Kelley
—119	1	F., at 1	Ha. 204	Kelley
121—	2	Tu., Th., 9 to 11	Ha. 303	Shepherd
—121	2	Tu., Th., 1 to 3	Ha. 303	Shepherd
131—	2	M., W., 8 to 10 M., W., 1 to 3 Tu., Th., 8 to 10	Ha. 303 Ha. 303 Ha. 303	Shepherd Norris Christensen,
		Tu., Th., 1 to 3	Ha. 303	Norris Robinson, Shepherd
—131	2	Tu., Th., 8 to 10	Ha. 303	Norris
132—	2	M., W., 1 to 3	Ha. 303	Kelley
—132	2	Tu., Th., 8 to 10 M., W., 9 to 11	Ha. 303 Ha. 303	Robinson Norris
133—	2	M., W., 9 to 11 W., F., 9 to 11	Ha. 303 Ha. 303	Norris Robinson
—133	2	Tu., Th., 2 to 4	Ha. 303	Robinson
134—134	3	Tu., Th., 8 to 11	Ha. 303	Kelley
135—135	4	Tu., Th., 1 to 4	Ha. 303	Norris
136—	2	Tu., Th., 9 to 11	Ha. 303	Shepherd
—136	2	M., W., 9 to 11 Tu., Th., 9 to 11	Ha. 303 Ha. 303	Shepherd Shepherd

ART—Continued

Course No.	Hours	Time	Room	Instructor
—137	3	M., W., 8 to 11	Ha. 303	Shepherd
138—	3	To be arranged	Ha.	Kelley
—139	3	To be arranged	Ha.	Robinson
141—	2	Tu., Th., at 10	Ha. 204	Robinson
—141	2	Tu., Th., at 8	Ha. 204	Shepherd
		Tu., Th., at 10	Ha. 204	Kelley
		Tu., Th., at 1	Ha. 204	Robinson
		Tu., Th., at 3	Ha. 204	Kelley
142—	3	M., W., 8 to 10	Ha. 303	Robinson
—142	3	M., W., 8 to 10	Ha. 303	Robinson
—143	3	M., W., at 9	Ha. 204	Kelley
—144	3	M., W., at 8	Ha. 204	Norris
—145	3	To be arranged	Ha.	
151—152	3	M., W., F., at 10	Ha. 204	Christensen
—151	3	M., W., F., at 8	Ha. 200	Christensen
153—	3	M., Th., F., at 11	Ha. 204	Christensen
154—155	2	Tu., Th., at 2	Ha. 200	Christensen
—156	2	Tu., Th., at 4	Ha. 200	Robinson
157—	3	M., W., F., at 10	Ha. 200	Kelley
—158	5	To be arranged	Ha.	Kelley

ASTRONOMY

101—102	3	M., W., F., at 8	Obs.	Manson
		M., W., F., at 1	Obs.	Manson
104—	3	M., W., F., 9 to 11	Obs.	Lord Manson
		M., W., F., 2 to 4	Obs.	
—105	3	Tu., at 11; Th., F., 1 to 4	Obs.	Lord Manson
		M., at 3; Tu. Th., 8 to 11		
107—108	3 to 5	To be arranged	Obs.	Lord Manson
109—110	4	To be arranged	Obs.	Lord
111—112	3 to 5	To be arranged	Obs.	Manson

BACTERIOLOGY

—102	2	L., Th., at 8	V. L. 8	Froning
		Lab., Th., 1 to 4	V. L. 201	Froning
107—	4 or 5	L., M., W., at 8	V. L. 101	Morrey
		M., W., at 9	V. L. 101	Morrey
		M., W., at 2	V. L. 101	Morrey
		Lab., Tu., Th., 8 to 11	V. L. 205	Froning McCoy
		Tu., Th., 1 to 4	V. L. 205	Froning McCoy
		M., W., 8 to 11	V. L. 201 205	Froning McCoy

BACTERIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., 1 to 4	V. L. 201	Froning
			205	McCoy
		M., W., 1 to 4; S., 8 to 11	V. L. 201	Froning
			205	McCoy
—108	2 to 5	L., M., W., at 9	V. L. 101	Morrey
		M., W., at 2	V. L. 101	Morrey
		Lab., M., W., 8 to 11	V. L. 201	Froning
			205	McCoy
		M., W., 1 to 4	V. L. 201	Froning
			205	McCoy
		M., 1 to 4; S., 8 to 11	V. L. 201	Froning
			205	McCoy
—110	2 to 5	L., Tu., Th., at 9	V. L. 102	Morrey
		Lab., to be arranged		Morrey
				McCoy
—112	2 to 5	L., Tu., Th., at 10	V. L. 102	Morrey
		Lab., to be arranged		Morrey
				McCoy
—114	2 to 5	L., Tu., Th., at 11	V. L. 102	Morrey
		Lab., to be arranged		Morrey
				McCoy
—116	2 to 5	L., M., W., at 8	V. L. 102	Morrey
		Lab., to be arranged		Froning
117—	2 to 5	L., W., at 11; F., at 1	V. L. 102	Starin
		Lab., M., 1 to 4; F., 2 to 5	V. L. 8	Starin
—118	2 to 5	L., M., at 2; F., at 1	V. L. 102	Starin
		Lab., W., 1 to 4; F., 2 to 5	V. L. 8	Starin
119—120	2 to 5	L., M., F., at 11	V. L. 102	Starin
		Lab., to be arranged		Starin
121—122	3 to 5	To be arranged		Morrey
123—124	3 to 5	To be arranged		Morrey
125—126	3 to 5	To be arranged		Morrey
				Starin
				Froning,
				McCoy
131—	4	L., M., F., at 10	V. L. 102	Morrey
		Lab., W., Sat., 8 to 11	V. L. 8	Starin
—132	4	L., M., Th., at 9	V. L. 102	Starin
			101	
		Lab., W., F., 8 to 11	V. L. 8	Starin

BIBLICAL LITERATURE

101—102	3	M., Th., F., at 11	O. 5	Breyfogle
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BIBLIOGRAPHY

101—102	1	To be arranged	Li.	Jones
103—	½	Th., at 3	Li. 107	Reeder
		F., at 11	Li. 107	Reeder
105—106	1	W., at 4	Li. 107	Reeder

BOTANY

Course No.	Hours	Time	Room	Instructor
101—102	4	L., Tu., at 9	B. Z. 100	Schaffner
		Tu., at 2	B. Z. 100	Detmers
		Th., at 9	B. Z. 100	Stover
		Th., at 2	B. Z. 100	Griggs
		Quiz., Tu., Th., at 8	B. Z. 208	Stover
			B. Z. 110	Detmers
		Tu., Th., at 10	B. Z. 208	Stover
			B. Z. 110	Detmers
			B. Z. 100	Sears
		Tu., Th., at 1	B. Z. 208	Griggs
			B. Z. 110	Detmers
			B. Z. 100	Sears
		Tu., Th., at 3	B. Z. 208	Griggs
			B. Z. 110	Detmers
			B. Z. 209	Sears
		Lab., M., 8 to 11	B. Z. 108	Detmers
		M., 1 to 4	B. Z. 62	Stover
		Tu., 8 to 11	B. Z. 108	
		Tu., 1 to 4	B. Z. 108	
		Th., 8 to 11	B. Z. 108	
		Th., 1 to 4	B. Z. 108	
		F., 8 to 11	B. Z. 108	Detmers
			B. Z. 62	Sears
		F., 1 to 4	B. Z. 108	Detmers
			B. Z. 62	Sears
107—	2	To be arranged	B. Z. 108	Detmers
110—	2	W., 1 to 4	B. Z. 108	
			110	Sears
113—	3	L., W., at 10	B. Z. 208	Stover
		Lab., M. F., 10 to 12	B. Z. 206	
—116	3	L., M., W., at 10	B. Z. 208	Stover
		Lab., F., 10 to 12	B. Z. 206	
117—118	3	L., Tu., at 9	B. Z. 110	Transeau
		Lab., W., 1 to 5	B. Z. 66	
—120	3	Sat. and Mon. arranged	B. Z. 210	Griggs
121—	3	L., W., at 1	B. Z. 110	Schaffner
		Lab., W., 2 to 4	B. Z. 62	
125—126	4	L., Tu., Th., at 8	B. Z. 109	Transeau
		Lab., Tu., Th., 1 to 3	B. Z. 112	
		Tu., Th., 3 to 5	B. Z. 112	
127—128	4	L., Tu., Th., at 11	B. Z. 110	Griggs
		Lab., Tu., Th., 8 to 10	B. Z. 210	
129—130	3 to 5	M., 1 to 4; other hours arranged	B. Z. 60	Schaffner
131—132	3 to 5	To be arranged	B. Z. 60	Schaffner
133—134	3 to 5	To be arranged		Schaffner, Transeau, Griggs,

BOTANY—Continued

Course No.	Hours	Time	Room	Instructor
				Detmers, Stover
135—136	1	Tu., at 4	B. Z. 110	Schaffner
137—138	1	M., at 4	B. Z. 110	Schaffner
139—140	3 to 5	To be arranged	B. Z. 210	Stover
—142	2	Th., 1 to 4	B. Z. 62	Schaffner
143—144	3	M., W., 8 to 12	B. Z. 210	Griggs
145—146	2	M., 1 to 4	B. Z. 108	Detmers
—150	3	M., at 9; W., 9 to 11	B. Z. 110, 112	Transeau
201—202	3 to 10	To be arranged	B. Z. 104	Schaffner
				Griggs
203—204	4 to 10	To be arranged	B. Z. 104	Schaffner
				Griggs
205—206	4 to 10	To be arranged	B. Z. 112	Transeau
207—208	3 to 10	To be arranged	B. Z. 210	Griggs,
				Stover
209—210	1	To be arranged		Schaffner

CHEMISTRY

105—106	4	L., M., at 8	Ch. 200	Evans and Department Assistants
		W., at 9	Ch. 200	
		M., at 1	Ch. 200	
		W., at 2	Ch. 200	
		Q., W., at 8	Ch. 101, 302	
		F., at 8	Ch. 302	
		F., at 9	Ch. 101, 302	
		W., at 1	Ch. 101, 302	
		F., at 1	Ch. 101, 302	
		F., at 2	Ch. 101, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		
—105	4	To be arranged		
109—110	4	L., F., at 10	Ch. 200	Evans and Department Assistants
		F., at 3	Ch. 200	
		Q., M., at 10	Ch. 207	
		M., at 3	Ch. 101, 302	
		W., at 10	Ch. 101, 207	
		W., at 3	Ch. 101, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., 1 to 4 Tu., Th., 1 to 4		
—109	4	To be arranged		
113—114	2	Tu., Th., at 1	Ch. 200	Henderson
117—	3	To be arranged		Olin
119—120	4	L., F., at 10	Ch. 207	Foulk
		L., M., at 3	Ch. 200	Foulk
		Lab. open mornings and afternoons		
121—	4	L., M., at 3	Ch. 207	Foulk
		Lab., Tu., W., 1 to 4		
—124	1	Th., at 3	Ch. 200	Foulk
127—	4	M., Tu., Th., F., at 11	Ch. 200	Boord
—132	2	Tu., at 11; F., at 4	Ch. 101	McPherson
—136	2	Tu., Th., at 11	Ch. 207	Foulk
150—	3	Tu., Th., at 9; S., at 11	Ch. 101	Evans
	5	Tu., Th., at 9; S., at 11		
		Lab. arranged		
151—152	2	Tu., Th., at 8	Ch. 200	McPherson
153—154	2 or 3	Laboratory open in after- noons		McPherson, Boord
155—156	2	To be arranged		Boord
157—158	3	M., W., F., at 8	Ch. 207	Henderson
159—	3	M., W., F., at 9	Ch. 207	Henderson
161—161	2 or 3	Laboratory open daily 8 to 12 and 1 to 4		Henderson
165—	2	M., W., at 11	Ch. 207	Foulk
167—	3 to 5	To be arranged		Olin
—168	3 to 5	L., Tu., at 9	Ch. 207	Olin
		Lab., to be arranged		
169—	3 to 5	To be arranged		Foulk
—176	3	M., F., at 11	Ch. 207	Foulk
177—	2	Tu., Th., at 8	Ch. 207	Withrow
—178	1	Tu., at 8	Ch. 207	Withrow
—182		Inspection trip		
—184		Report		
185—	2	W., Th., 1 to 4	Ch. 207	Withrow, Sweeney
—186	3	W., Th., F., 1 to 4	Ch. 207	Withrow
187—187	2 or 3	Laboratory open in after- noons		Henderson
—194	2	To be arranged		Withrow
201—202	3	To be arranged		Henderson
205—206	2 or 3	To be arranged		McPherson, Boord
209—210	3	To be arranged		Henderson
217—	2	Tu., 4 to 6	Ch. 302	Boord
—218	2	To be arranged		Evans

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
221—	2	Th., 4 to 6	Ch. 101	Henderson
—224	2	Th., 4 to 6	Ch. 101	Henderson
225—226	2	To be arranged		Withrow
235—236	5 to 10	To be arranged		
239—	2	To be arranged		Foulk

COMPARATIVE LITERATURE

111—112	1	M., at 3	U. 306	Elden
175—	2	Tu., Th., at 3 (German)	U. 321	Barrows
191—192	2	M., W., at 11	L. 107	Lewisohn
195—	2	Tu., F., at 4	U. 306	Bolling
197—	2	Tu., Th., at 2	U. 321	Barrows
—214	2	F., 4 to 6	L. 308	Barrows

DAIRYING

101—	4	M., W., F., at 10	T. 200	Erf
		Lab., Tu., 1 to 4	T. 3, 5, 10	
		F., 1 to 4		
		M., W., F., at 3	T. 200	Erf
		Tu., 8 to 11	T. 3, 5, 10	
		F., 8 to 11		
—101	4	M., W., F., at 9	T. 200	Erf
		Lab., Tu., 1 to 4	T. 3, 5, 10	
		F., 1 to 4		
		M., W., F., at 2	T. 200	Erf
		Lab., Tu., 8 to 11	T. 3, 5, 10	
		F., 8 to 11		

ECONOMICS AND SOCIOLOGY**Economics**

101—102	3	M., W., F., at 8	P. 12	Bice
		M., W., F., at 8	P. 13	Drury
		M., W., F., at 8	P. 9	
		M., W., F., at 9	P. 12	Lockhart
		M., W., F., at 9	P. 13	Ruggles
		M., W., F., at 9	P. 9	Bice
		M., W., F., at 9	Ha. 205	
		M., W., F., at 10	P. 12	Hammond
		M., W., F., at 10	P. 13	Drury
		M., W., F., at 10	P. 9	Gephart
		M., Th., F., at 11	P. 12	
		M., Th., F., at 11	P. 13	
		M., W., F., at 1	P. 12	Gephart
		M., W., F., at 1	P. 13	Drury
		M., W., F., at 2	P. 12	Parry

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 2	P. 13	Drury
		M., W., F., at 3	P. 12	Gephart
		M., W., F., at 3	P. 13	
		M., W., F., at 4	P. 12	Coon
		M., W., F., at 4	P. 10	
102—101	3	M., W., F., at 8	Ha. 205	
		M., W., F., at 3	P. 9	Walradt
103—104	2	Tu., Th., at 9	P. 6	Huntington
105—106	2	Tu., Th., at 8	P. 12	Ruggles, Walradt
107—108	3	M., W., F., at 9	Ph. 304	
109—	3	M., W., F., at 8	Ph. 304	
—112	2	Tu., Th., at 8	P. 6	
119—120	3	M., W., F., at 2	P. 9	Mark
131—	3	M., W., F., at 1	P. 6	Walradt
—133	3	M., W., F., at 1	P. 6	Huntington
139—	3	L., Tu., Th., at 8	P. 10	
		Tu., Th., at 9	P. 10	
		Tu., Th., at 9	P. 7	
		Tu., Th., at 10	P. 10	
		Tu., Th., at 1	P. 10	
		Tu., Th., at 1	P. 7	
		Tu., Th., at 2	P. 10	
		Tu., Th., at 3	P. 10	
		Lab., M., 8 to 10	P. 11	
		Tu., 10 to 12	P. 11	
		W., 8 to 10	P. 11	
		F., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		Tu., 1 to 3	P. 11	
		W., 1 to 3	P. 11	
		F., 1 to 3	P. 11	
—139	3	Tu., Th., at 1; Th., 8 to 10	P. 6, 11	
141—144	2	Tu., Th., at 10	P. 9	Lockhart
145—146	2	Tu., 3 to 5	P. 6	Ruggles
147—148	2	Tu., Th., at 1	P. 13	Walradt
149—150	3	M., Th., F., at 11	P. 9	
		M., W., F., at 1	P. 9	Walradt
—149	3	M., W., F., at 1	P. 101	
154—153	3	M., Th., F., at 11	P. 10	Lockhart
157—158	2	Tu., Th., at 9	P. 13	Ruggles
159—	3	M., W., F., at 2	P. 6	Huntington
160—162	3	M., W., F., at 1	P. 109	Parry
163—	3	M., W., F., at 9	P. 7	Hammond
165—166	3	M., W., F., at 3	P. 7	Hammond
167—168	3	M., W., F., at 8	P. 7	Ruggles
169—170	2	Tu., Th., at 1	P. 9	Parry
171—	3	Tu., Th., at 1	P. 6	

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., Th., 8 to 10	P. 11	
—171	3	Tu., Th., at 8	P. 10	
		Tu., Th., at 9	P. 7	
		Tu., Th., at 10	P. 10	
		Tu., Th., at 1	P. 10	
		Tu., Th., at 1	P. 7	
		Tu., Th., at 2	P. 10	
		Tu., Th., at 3	P. 10	
		Lab., M., 8 to 10	P. 11	
		Tu., 10 to 12	P. 11	
		W., 8 to 10	P. 11	
		F., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		Tu., 1 to 3	P. 11	
		W., 1 to 3	P. 11	
		F., 1 to 3	P. 11	
172—	3	M., W., F., at 2	P. 109	
—173	3	M., W., F., at 10	P. 11	Huntington
—174	3	M., W., F., at 2	P. 109	
—175	3	M., W., F., at 3	P. 6	Parry
177—178	2	Tu., at 2	P. 12	Mark
		Tu., at 3	P. 11	Mark
		Lab., Th., 1 to 3	P. 11	
		Th., 3 to 5	P. 11	
180—179	2	Tu., Th., at 9	P. 9	Lockhart
181—182	3	M., W., F., at 9	P. 6	Walradt
—183	3	M., W., F., at 9	P. 7	Hammond
—184	3	M., W., F., at 2	P. 6	Huntington
185—186	3	M., W., F., at 10	P. 7	Hagerty
—188	2	Tu., Th., at 8	P. 7	Ruggles
189—190	2	Tu., Th., at 11	P. 6	Huntington
203—204	3	M., Th., F., at 11	L. 305	Parry
207—208	2	Th., 4 to 6	L. 305	
209—210	1 to 3	To be arranged		Hammond
211—212	1 to 3	To be arranged		Ruggles
213—214	1 to 3	To be arranged		Lockhart
215—216	2	To be arranged		Mark

Sociology

101—102	3	M., W., F., at 8	P. 6	North
		M., W., F., at 8	P. 10	Drury
		M., W., F., at 9	O. 105	Bruder
		M., W., F., at 9	Ha. 200	North
		M., W., F., at 10	P. 6	
		M., W., F., at 10	O. 5	Bruder
		M., Tu., F., at 11	P. 7	
		M., W., F., at 1	P. 7	Mark

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 2	P. 10	McKenzie
		M., W., F., at 3	P. 10	Bice
		M., W., F., at 4	P. 9	McKenzie
102—101	3	M., W., F., at 3	P. 101	
—104	3	M., W., F., at 3	O. 5	Bruder
105—	3	M., W., F., at 3	P. 109	Bruder
107—	3	M., W., F., at 2	L. 107	McKenzie
—108	1	Tu., at 8	Arch. M.	Mills
109—	4	M., W., F., at 8	P. 109	Hagerty
		Lab., S., 9 to 12		
111—	3	M., W., F., at 10	P. 109	
—112	4	M., W., F., at 8	P. 109	Hagerty
		Lab., S., 9 to 12		
—114	3	M., W., F., at 9	P. 109	North
115—116	4	To be arranged		Hagerty
117—118	2	Tu., 4 to 6	P. 7	Mark
123—124	3	M., W., F., at 2	P. 101	Bruder
125—126	3	M., W., F., at 1	P. 10	McKenzie
127—128	3	M., W., F., at 10	P. 10	North
129—130	3	M., W., F., at 2	P. 7	North
131—132	3	M., W., F., at 9	P. 10	Hagerty
201—202	2	To be arranged		
207—208	2	Th., 4 to 6	P. 7	

ENGINEERING DRAWING

101—	2	M., W., 8 to 10	Br. 203, Ha. 301	All Instructors
		M., W., 1 to 3	Br. 203, 200	
		Tu., Th., 8 to 10	Ha. 301	
		Tu., Th., 1 to 3	Br. 203, 200	
		F., S., 8 to 10	Br. 104, Ha. 301	
—101	2	F., S., 8 to 10		
102—	3	M., at 8	Br. 200	
		M., 9 to 11; Tu., 8 to 10		
—102	3	L., M., at 2	Br. 203, 1	All Instructors
		M., at 9	Br. 203	
		W., at 10	Br. 203, 200	
		W., at 3	Br. 203	
		F., at 8	Br. 203, 200	
		F., at 10	Br. 200, 104	
		F., at 1	Br. 203, 200	
		F., at 2	Br. 104, 200, 1	
		F., at 3	Br. 203	
		Lab., M., W., 8 to 10	Br.	
		M., W., 1 to 3	Br.	
		Tu., Th., 8 to 10	Br.	

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., 1 to 3	Br.	
		F., S., 8 to 10	Br.	
103—	3	L., M., W., at 2	Br. 1, 12	All Instruc- tors
		Tu., Th., at 8	Br. 203	
		Tu., Th., at 9	Br. 203, 200	
		Tu., Th., at 10	Br. 203	
		Tu., Th., at 3	Br. 203, 200, 104	
		Lab., M., 1 to 3	Br.	
		Tu., 1 to 3	Br.	
		W., 1 to 3	Br.	
		Th., 8 to 10	Br.	
		F., 8 to 10	Fr.	
		F., 1 to 3	Br.	
—104	3	L., M., at 10	Br. 104	Williams
		M., at 3	Br. 200	Williams
		Tu., at 8	Br. 203	Svensen
		Tu., at 3	Br. 203	Withrow, Batesole
		Lab., M., Tu., 8 to 10	Ha.	
		W., Th., 8 to 10	Ha.	
		Tu., W., 1 to 3	Ha.	
		Th., F., 1 to 3	Ha.	
		F., 1 to 3; S., 8 to 10	Ha.	
105—	3	L., M., W., at 10	Br. 203	Turnbull
		M., W., at 2	Br. 203	Turnbull
		Lab., F., 10 to 12	Br.	
		F., 1 to 3	Br.	
—106	3	L., Tu., Th., at 8	Br. 12	Turnbull
		M., W., at 1	Br. 12	Turnbull
		Lab., Tu., 9 to 11	Br.	
		M., 2 to 4	Br.	
107—	3	L., Tu., Th., at 2	Br. 203	Meiklejohn
		Lab., Tu., 8 to 10	Br.	
		Sat., 8 to 10	Br.	
108—	3	Tu., Th., at 8; Th., 1 to 4	Br. 200	French
—110	2	M., Tu., 8 to 10	Ha. 301	Williams, Svensen
		W., Th., 10 to 12	Ha. 301	Gilbert
111—	2	M., Tu., 8 to 10	Br.	Williams Svensen
		M., Tu., 1 to 3	Br.	
		Th., F., 1 to 3	Br.	
113—	4	Th., F., 1 to 4	Br. 203	Svensen
—114	3	Th., F., 1 to 4	Br. 203	Svensen
121—122	2	M., Tu., 1 to 3	Br. 12, 203	Svensen
125—125	2	L., Tu., at 1	Ha. 301, Br. 104	French Meiklejohn
		Th., at 9	Br. 104	

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
		Th., at 1	Br. 104	Withrow
		F., at 10	Br. 203	Batesole
		Lab., W., 8 to 11	Br.	
		W., 1 to 4	Br.	
		F., 8 to 11	Br.	
		F., 1 to 4	Br.	
127—	1½	Sat., 8 to 11	Br. 203	French Turnbull
—128	1½	Sat., 8 to 11	Br. 203	French
129—	1	Sat., 8 to 10	Br.	
—130	2	Sat., 8 to 12	Br.	
131—132	3	M., W., 1 to 4	Br. 200	French
139—	4	Th., F., 1 to 4	Br. 203	Svensen
—140	3	Th., F., 1 to 4	Br. 203	Svensen

ENGLISH

101—104	2	M., W., at 10	Ph. 5	
		M., W., at 2	Ph. 304	
		Tu., Th., at 8	Ph. 202, 104, 204, 302	
		Tu., Th., at 9	Ph. 202, 104, 102, P. 109	
		Tu., Th., at 10	U. 312	
		Tu., Th., at 1	P. 7, P. 12	
		Tu., Th., at 1	Ph. 202, 104 P. 12	
		Tu., Th., at 2	Ph. 202, 104, P. 9, P. 13	
		Tu., Th., at 3	Ph. 202, 104, 302, 204	
104—101	2	Tu., Th., at 8	Ph. 102	
		Tu., Th., at 1	Ph. 102	
		Tu., Th., at 4	Ph. 102	
105—106	2	Tu., Th., at 10	Ph. 104	Beck
107—108	2	Tu., Th., at 10	Ph. 202	Graves
110—109	2	Tu., Th., at 2	Ph. 102	Percival
127—128	2	Tu., Th., at 10	Ph. 204	McKnight
133—133	3	M., W., F., at 10	Ph. 102	Taylor
		M., W., F., at 3	Ph. 302	Andrews
—136	3	M., W., F., at 1	Ph. 104	Percival
137—	3	M., W., F., at 1	Ph. 104	Percival
141—142	3	M., W., F., at 9	Ph. 102	Taylor
		M., W., F., at 10	Ph. 304	Cooper
		M., W., F., at 1	Ph. 102	Andrews
		M., W., F., at 2	Ph. 303	Percival
143—144	3	M., W., F., at 2	Ph. 102	Andrews

ENGLISH—Continued

Course No.	Hours	Time	Room	Instructor
145—146	3	M., W., F., at 8	Ph. 204	Graves
		M., W., F., at 10	Ph. 204	Beck
		M., W., F., at 2	Ph. 104	Cooper
		M., W., F., at 3	Ph. 102	Percival
151—152	3	M., W., F., at 1	L. 104	McKnight
154—153	3	M., W., F., at 3	L. 104	McKnight
155—156	3	M., W., F., at 2	Ph. 102	Taylor
157—158	3	M., W., F., at 9	Ph. 204	Graves
159—160	2	Tu., Th., at 2	Ph. 302	Andrews
165—166	3	M., W., F., at 2	L. 104	McKnight
167—168	3	M., W., F., at 10	Ph. 104	Denney
169—170	3	M., W., F., at 9	Ph. 104	Cooper
181—	2	Tu., Th., at 10	Ph. 102	Denney
201—202	2	W., 4 to 6	L. 105	Graves
—204	2	To be arranged		Denney
205—206	2	M., 4 to 6	L. 104	Denney
207—208	2	Tu., 4 to 6	L. 104	Taylor
209—	2	Th., 4 to 6	L. 105	McKnight
—212	2	Th., 4 to 6	L. 105	McKnight
213—214	2	Th., 4 to 6	L. 104	Cooper
215—216	2	Th., 4 to 6	Ph. 204	Andrews
217—218	2	Tu., 4 to 6	L. 105	Percival
219—220	2	W., 4 to 6	L. 104	Denney

PUBLIC SPEAKING

101—	2	Tu., Th., at 9	Ph. 204	Lindsley
101—102	2	Tu., Th., at 8	Ph. 304	Lindsley
		Tu., Th., at 10	Ph. 303	Ketcham
		Tu., Th., at 10	Ha. 200	Lindsley
		M., W., at 1	Ph. 304	Lindsley
		Tu., Th., at 1	Ph. 204	Ketcham
		M., W., at 2	Ph. 204	Lindsley
		M., W., at 3	Ph. 204	Lindsley
107—108	3	M., at 3; W., 3 to 5	Ph. 304	Ketcham
—114	2	Tu., Th., at 9	Ph. 204	Lindsley
121—122	2	Tu., Th., at 2	Ph. 304	Ketcham
125—126	2	Tu., Th., at 9	Ph. 304	Ketcham
		Tu., Th., at 3	Ph. 304	Ketcham

EUROPEAN HISTORY

101—102	3	M., W., F., at 8	U. 201	All Instructors
		M., W., F., at 8	U. 316	
		M., W., F., at 9	U. 201	
		M., W., F., at 10	U. 201	

EUROPEAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 1	U. 201	
		M., W., F., at 1	U. 202	
		M., W., F., at 2	U. 201	
		M., W., F., at 3	U. 201	
		M., W., F., at 4	U. 201	
103—104	3	M., W., F., at 8	U. 202	Perkins
		M., W., F., at 3	U. 202	Harris
105—106	3	M., W., F., at 9	U. 202	McNeal
107—108	2	Tu., Th., at 10	U. 201	McNeal
109—110	2	Tu., Th., at 11	L. 304	Siebert
113—114	3	M., W., F., at 10	U. 202	Siebert
115—116	2	Tu., Th., at 10	L. 107	Siebert
119—120	2	Tu., Th., at 9	U. 201	McNeal
123—124	3	M., W., F., at 2	U. 202	Perkins
125—126	2	Tu., Th., at 1	L. 304	Harris
127—128	3	M., W., F., at 4	U. 202	
—152	2	Tu., Th., at 9	L. 307	Siebert, Perkins
201—202	2	To be arranged		McNeal
203—204	2 to 5	To be arranged		Siebert

FARM CROPS

101—	4	M., W., F., at 4	H. F. 108	Wiggans
		Lab., Tu., 8 to 10	H. F.	
		Th., 8 to 10	H. F.	
—101	4	M., W., F., at 11	H. F. 108	Wiggans
		Lab., Tu., 1 to 3	H. F.	
		Th., 1 to 3	H. F.	

FORESTRY

101—	2	Tu., Th., at 8	H. F. 107	Scherer
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GEOLOGY

101—102	3	M., W., F., at 8	O. 5	Hills
		M., W., F., at 9	O. 5	Hills
		M., W., F., at 1	O. 105	Bownocker
		M., W., F., at 2	O. 105	Cottingham
103—	3	M., W., F., at 10	O. 105	Bownocker
—104	3	M., W., F., at 10	O. 105	Carman
105—	3 to 5	To be arranged; field trips Saturday		Carman
—106	3	To be arranged; field trips Saturday		Hills

GEOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
107—108	2 to 5	To be arranged		Carman
111—	3	Tu., Th., 8 to 11 and 1 to 5	O. 5	Hills
113—114	2 to 5	To be arranged		Carman, Hills
116—	3	To be arranged		Hills
141—142	2 to 5	To be arranged		Bownocker, Carman, Hills
151—151	Agr. 3	L., Tu., Th., at 8	O. 105, 2nd sem. 5	Verwiebe
		Tu., Th., at 9	O. 105	
		Tu., Th., at 10	O. 5, 2nd sem. 105	
		Tu., Th., at 1	O. 105, 2nd sem. 5	Verwiebe
		Tu., Th., at 2	O. 105	Verwiebe
		Tu., Th., at 3	O. 105	Cottingham
		Lab., W., 8 to 10	O.	Verwiebe
		W., 1 to 3	O.	Verwiebe
		F., 8 to 10	O.	Verwiebe
		F., 10 to 12	O.	Cottingham
		F., 1 to 3	O.	Verwiebe
—162	4	M., W., F., at 9	O. 202	
—164	3	M., W., F., at 10	O. 202	
165—	3	Tu., Th., at 10	O. 105	
		Lab., F., 10 to 12	O.	Verwiebe
—166	2	Tu., at 9; W., 2 to 4	O. 202	Bownocker
167—	3	M., W., F., at 8	O. 105	Bownocker
168—	3	Tu., Th., at 11	O. 105	Carman
		Lab., M., 1 to 3		
—168	3	L., Tu., Th., at 9	O. 5	Carman
		Lab., W., 1 to 3	O.	Carman
—170	3	M., W., F., at 8	O. 105	Bownocker
175—176	2	M., W., at 4	O. 5	Hills
201—202	3 to 5	To be arranged		Bownocker, Carman
203—204	3 to 5	To be arranged		Carman

GERMAN

101—102	4	M., Tu., W., Th., at 8	U. 320	All Instruc- tors
		M., Tu., W., Th., at 8	H. F. 106	
		M., Tu., W., Th., at 9	U. 320	
		M., Tu., W., Th., at 10	U. 320	
		M., Tu., W., Th., at 1	U. 320	
		M., Tu., W., Th., at 2	U. 320	
		M., Tu., W., Th., at 3	U. 320	

GERMAN—Continued

Course No.	Hours	Time	Room	Instructor
—101	4	M., Tu., W., Th., at 4	H. F. 106	Reese
102—103	4	M., Tu., W., Th., at 4	U. 320	Busey
103—104	4	M., Tu., W., Th., at 8	U. 319	All Instruc-
		M., Tu., W., Th., at 9	U. 319	tors
		M., Tu., W., Th., at 9	Br. 1	
		M., Tu., W., Th., at 10	U. 319	
		M., Tu., W., Th., at 1	U. 319	
		M., Tu., W., Th., at 2	U. 319	
		M., Tu., W., Th., at 3	H. F. 107	
103—106	4	M., Tu., W., Th., at 10	H. F. 106	
		M., Tu., W., Th., at 1	H. F. 106	
		M., Tu., W., Th., at 4	U. 319	
104—	4	M., Tu., W., Th., at 4	H. F. 106	Reese
107—108	4	M., Tu., W., Th., at 10	Ph. 303	Busey
		M., Tu., W., Th., at 3	H. F. 106	Kotz
115—116	3	M., W., F., at 9	H. F. 106	Keidel
		M., W., F., at 4	U. 321	Kotz
117—118	2	Tu., Th., at 10	H. F. 107	Thomas
119—120	2	Tu., Th., at 9	H. F. 205	Lewisohn
		Tu., Th., at 9	H. F. 106	Keidel
131—132	2	M., Th., at 11	U. 320	Barrows
		Tu., Th., at 3	H. F. 113	Reese
133—134	2	M., Tu., W., Th., at 8	U. 306	Reese
				Keidel
151—152	3	M., Th., F., at 11	U. 319	Evans
155—156	2	Tu., Th., at 10	U. 209	Eisenlohr
159—160	2	Tu., Th., at 9	U. 202	Reese
161—162	2	To be arranged		Thomas
163—164	2	Th., 4 to 6	U. 321	Lewisohn
171—172	2	Tu., Th., at 2	U. 202	Eisenlohr
173—174	2	Tu., Th., at 4	U. 308	Evans
175—176	2	Tu., Th., at 3	U. 321	Barrows
177—178	2	Tu., Th., at 8	U. 412	Busey
201—202	2	Tu., 4 to 6	L. 308	Eisenlohr
209—210	2	To be arranged		Keidel
—214	2	F., 4 to 6	L. 308	Barrows
215—216	2	W., 4 to 6	L. 308	Evans

GREEK LANGUAGE AND LITERATURE

101—102	4	M., T., W., Th., at 1	U. 306	Bolling
107—108	3	To be arranged		
109—110	2	To be arranged		
111—112	2	To be arranged		
113—114	2	To be arranged		
115—116	2	Tu., Th., at 3	U. 306	Bolling
119—120	2	To be arranged		
121—122	2 to 4	To be arranged		
123—124	2	M., W., at 4	U. 306	Bolling
125—126	4	M., Tu., W., Th., at 2	U. 306	Bolling

HISTORY AND PHILOSOPHY OF EDUCATION

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 10	Ha. 101	Anderson
		M., W., F., at 4	Ha. 101	Anderson
103—104	2	Tu., Th., at 10	Ha. 101	Anderson
105—106	2	Tu., Th., at 9	Ha. 101	Anderson
107—108	2	M., W., at 3	Ha. 101	Anderson
109—110	2	Tu., Th., at 3	Ha. 101	Anderson
—112	2	Tu., Th., at 2	Ha. 101	Anderson
201—202	2	Tu., 4 to 6	L. 309	Anderson
203—204	2	To be arranged		Anderson
—206	1	M., at 9	L. 309	Anderson

HOME ECONOMICS

101—102	5	L., M., W., at 9	H. E. 203	White
		M., W., at 2	H. E. 102	White
		Q., Th., at 10	H. E. 102	White
		F., at 8	H. E. 102	White
		F., at 10	H. E. 321	White
		F., at 1	H. E. 102	White
		Lab., M., W., 1 to 3	H. E.	
		M., W., 9 to 11; 2nd		
		sem., Tu., F., 10 to 12		
		Tu., Th., 8 to 10		
		Tu., Th., 1 to 3; 2nd		
		sem., Tu., Th., 3 to 5		
104—	3	M., W., F., at 10	H. E. 203	Linder
—104	3	M., W., F., at 10	H. E. 203	Linder
		M., W., F., at 2	H. E. 203	
105—106	2 to 5	Th., at 2	H. E. 321	Van Meter
		Lab. to be arranged	H. E. 301,	
			302	
—108	2	Tu., Th., at 9	H. E. 102	Van Meter, Hathaway, Adams
110—	4	Tu., Th., at 8	H. E. 203	Skinner
		Lab., M., W., 11 to 1	H. E. 204	
—110	4	Tu., Th., at 8	H. E. 203	Skinner
		Tu., Th., at 1	H. E. 203	Skinner
		Lab., Tu., F., 10 to 12	H. E. 204	
		M., W., 11 to 1	H. E. 204	
111—112	2	L., M., at 9	H.E. 218, 321	Walker
		M., at 2	H.E. 218, 321	Tucker
		Tu., at 8	H.E. 218, 321	Walker
		Tu., at 2	H.E. 218, 321	Walker
		Th., at 9	H.E. 218, 321	Walker
		Th., at 1	H.E. 218, 321	Walker
		Lab., Tu., 9 to 11	H.E. 215, 216,	

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
		W., 8 to 10		
		W., 1 to 3		
		Th., 2 to 4		
		F., 8 to 10		
		F., 1 to 3		
113—	3	L., Th., at 11	H. E. 102	Hathaway
		Th., at 10	H. E. 203	Hathaway
		Lab., Tu., F., 10 to 12	H. E. 113, 114	
		Tu., Th., 1 to 3		
		M., W., 1 to 3		
—113	3	L., Th., at 11	H. E. 102	Hathaway
		Tu., F., 10 to 12	H. E. 113, 114	
—116	3	Th., at 10	H. E. 203	Hathaway
		M., W., 1 to 3	H. E. 113	
		M., W., 8 to 10	H. E. 113, 114	
118—118	3	Th., at 10; Tu., 10 to 12;	H. E. 218,	Tucker
		F., 1 to 3	211	
		F., at 9; Tu., Th., 3 to 5	H. E. 218,	Tucker
			211	
119—	3	M., Th., at 11; F., 10 to 12	H. E. 218	Walker
		M., W., at 3; F., 2 to 4	H. E. 218	Walker
—119	3	M., Th., at 11; F., 10 to 12	H. E. 218	Walker
121—	3	M., at 10	H. E. 218	Linder,
				Skinner
		Lab., Tu., Th., 8 to 10	H. E. 302	
		M., W., 2 to 4	H. E. 302	
123—124	2	Tu., at 2; Lab., to be	H. E. 203	Adams
		arranged		
125—126	3	To be arranged		White
201—202	2 to 5	To be arranged		White

HORTICULTURE

101—	4	M., W., F., at 10	H. F. 113	Davis
		Lab., Tu., 1 to 3		
		Th., 1 to 3		
—120	4	M., W., F., at 10	H. F. 113	Davis
		Lab., Tu., 1 to 3		
		Th., 1 to 3		
—156	2	M., W., at 8	H. F. 204	Elwood

JOURNALISM

101—102	3	M., W., at 9	S. 201	Myers
		M., W., at 1	S. 201	Myers
		Lab. to be arranged		
102—101	3	To be arranged		Myers
105—106	3	Tu., Th., at 11; Lab.	S. 201	Myers
		to be arranged		

JOURNALISM—Continued

Course No.	Hours	Time	Room	Instructor
109—110	2	Tu., at 10; Lab. to be arranged	S. 201	Myers
111—112	3	M., W., F., at 8	S. 201	Getz
113—114	2	Tu., Th., at 8	S. 201	Myers, Getz
115—116	2	Tu., Th., at 9	S. 201	Getz
117—118	3	M., W., F., at 10	S. 201	Getz

LATIN

101—102	4	M., Tu., W., Th., at 9	U. 306	Hodgman
		M., Tu., W., Th., at 10	U. 316	Elden
		M., Tu., W., Th., at 3	U. 316	Dunlap
103—104	3	M., W., F., at 10	U. 306	Hodgman
		M., W., F., at 2	U. 316	Elden
105—106	2	Tu., Th., at 9	U. 316	Elden
111—112	1	M., at 3	U. 306	Elden
113—114	3	M., W., F., at 9	U. 316	Elden
115—116	3	M., Th., F., at 11	U. 316	Hodgman
119—120	1 or 2	Tu., at 3	U. 312	Hodgman
121—122	2 to 5	Tu., Th., at 9	L. 311	Derby, Hodgman, Elden
123—124	1	Th., at 3	U. 312	Hodgman
125—126	1	W., at 3	U. 306	Elden
127—128	1 or 2	Tu., Th., at 2	U. 316	Derby
129—130	2	Tu., Th., at 10	U. 306	Hodgman
147—148	4	M., Tu., W., Th., at 10	H. F. 203	Dunlap
149—150	4	M., Tu., W., Th., at 2	H. F. 107	Dunlap
201—202	1	M., at 4	U. 307	Hodgman
203—204	1	F., at 3	U. 316	Elden
213—214	2 or 3	M., W., F., at 9	Li. 311	Derby
215—216	1 to 3	M., W., at 4	U. 316	Derby

MANUAL TRAINING

111—112	3	M., Th., F., at 11	S.	Usry
117—118	2	L., Th., at 10	S.	Usry
		Lab., Th., 8 to 10	S.	Usry
121—122	2	L., M., at 4	S.	Usry
		W., at 1	S.	Usry
		Lab., M., 2 to 4	S.	Usry
		Tu., 9 to 11	S.	Usry
		W., 2 to 4	S.	Usry
123—123	2	M., W., at 10	S.	Usry

MATHEMATICS

101—102	5	To be arranged		Minor
107—107	3	M., W., F., at 8	U. 310	Rasor
		M., W., F., at 9	U. 310	Rasor

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 10	U. 312	Bohannon
		M., W., F., at 1	U. 310	Arnold
		M., W., F., at 2	U. 310	Rasor
		M., W., F., at 3	U. 312	Arnold
113—114	5	To be arranged		
121—122	3	Tu., Th., at 8; F., 8 to 10	U. 313, 302	
		Tu., Th., at 9; F., 9 to 11	U. 313, 303	West
		Tu., Th., at 1; F., 1 to 3	U. 313, 302	Arnold
		Tu., Th., at 2; F., 2 to 4	U. 313, 303	
125—126	2	Tu., 3 to 5	L. 306	Arnold
127—128	3	M., W., F., at 1	U. 311	Kuhn
129—130	3	M., W., F., at 9	U. 313	West
		M., W., F., at 1	U. 313	West
131—132	5	Daily at 8	U. 309	Preston
		Daily at 8	U. 312	Bohannon
		Daily at 9	U. 309	McCoard
		Daily at 9	U. 308	Bareis
		Daily at 10	U. 309	McCoard
		Daily at 10	U. 310	Arnold
		Daily at 1	U. 309	Preston
		Daily at 1	U. 308	Rickard
		Daily at 1	U. 312	Swartzel
		Daily at 2	U. 311	Swartzel
		Daily at 2	U. 312	Preston
		Daily at 2	H. F. 205	Morris
		Daily at 3	U. 309	McCoard
		Daily at 3	U. 311	Bareis
132—131	5	Daily at 10	U. 308	Rickard
		Daily at 3	U. 310	Preston
135—	3	M., W., F., at 2	U. 312	West
141—142	5	Daily at 8	U. 303	Bareis
		Daily at 8	U. 311	Kuhn
		Daily at 9	U. 312	Bohannon
		Daily at 10	U. 311	Rasor
		Daily at 10	U. 313	Swartzel
		Daily at 1	H. F. 205	Morris
		Daily at 2	U. 309	McCoard
		Daily at 3	U. 308	Rickard
		Daily at 3	H. F. 205	Morris
142—141		Daily at 9	U. 311	Kuhn
		Daily at 2	U. 308	Rickard
151—	1	Tu., at 11	U. 312	Bohannon
163—164	3	M., W., F., at 2	L. 306	Bareis
165—166	3	M., Th., F., at 11	U. 310	Morris
167—168	3	M., Th., F., at 11	U. 312	Bohannon
173—174	3	M., W., F., at 10	L. 306	Kuhn
183—184	2	M., F., at 11	U. 313	West
185—186	2	Tu., Th., at 2	U. 310	Arnold

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
—190	2	M., W., at 2	U. 313	West
201—202	3	M., W., F., at 1	L. 306	Rasor
203—204	3	M., Th., F., at 11	U. 311	Swartzel
205—206	3	To be arranged		Bohannon
207—	3	To be arranged		Arnold
211—212		To be arranged		Kuhn
213—214		To be arranged		Rasor
215—216		To be arranged		
217—218		To be arranged		Swartzel
219—220		To be arranged		
221—222		To be arranged		Kuhn

MECHANICS

101—102	5	Daily at 8	Lo. 232, 231	Boyd, Coddington
		Daily at 9	Lo. 232, 231	Boyd, Coddington
		Daily at 10	Lo. 231	Boyd
		Daily at 1	Lo. 232, 231	Boyd, Coddington
		Daily at 2	Lo. 232	Boyd
103—	5	Daily at 11	L. 231	Boyd
—104	2	Tu., Th., at 8	Lo. 107	Boyd
		M., W., at 2	Lo. 107	Boyd
201—202	3	To be arranged		Boyd, Coddington

MILITARY SCIENCE AND TACTICS

1—1	1	M., W., Th., F., at 11 M., W., F., at 4; Th., at 11	Ha.	Converse, Tilford, Sherrard
2—2	1	M., W., F., at 11 M., W., F., at 4	Ha.	Converse, Tilford, Sherrard

MINERALOGY

102—	3	M., W., F., at 8	Lo. 107	McCaughey
—102	3	M., W., F., at 8	Lo. 107	McCaughey
		M., W., F., at 9	Lo. 107	McCaughey
—104	3	Th., F., 1 to 4	Lo. 107	McCaughey
105—	2	To be arranged	Lo.	McCaughey
117—118	3	To be arranged	Lo.	McCaughey
121—	3 to 5	To be arranged	Lo.	McCaughey
123—124	5	To be arranged	Lo.	McCaughey
—126	3 to 5	To be arranged	Lo.	McCaughey

PHILOSOPHY

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 9	U. 321	Leighton
		M., W., F., at 9	H. F. 107	Chandler
		M., W., F., at 10	H. F. 107	
102—101	3	M., W., F., at 8	U. 321	Chandler
		M., W., F., at 2	L. 307	Davies
105—106	3	M., W., F., at 1	L. 307	Davies
115—116	2	Tu., Th., at 10	Ha. 205	Chandler
117—118	2	M., W., at 3	U. 321	Leighton
119—	3	M., Th., F., at 11	U. 321	Leighton
123—124	3	M., W., F., at 1	U. 321	Chandler
—128	3	M., W., F., at 2	L. 107	Chandler
131—132	3	M., W., F., at 9	L. 307	Davies
135—136	2	Tu., Th., at 1	L. 307	Davies
—142	3	M., Th., F., at 11	U. 321	Leighton
151—152	3	M., W., F., at 10	U. 321	Leighton, Davies
		M., W., F., at 2	U. 321	Chandler
161—162	3	M., W., F., at 10	L. 307	Davies
201—202	3 to 6	To be arranged		
207—208	3 to 6	To be arranged		

PHYSICAL EDUCATION

For Men

101—102	1	Tu., Th., at 10	Gym.	Marsh
		M., W., at 10	Gym.	Trautman
		M., F., at 10	Gym.	Trautman
		W., F., at 10	Gym.	Trautman
		Tu., Th., at 11	Gym.	Trautman
		Tu., Th., at 2	Gym.	Trautman
		M., W., at 2	Gym.	Ohlson
		M., F., at 2	Gym.	Ohlson
		W., F., at 2	Gym.	Ohlson
		Tu., Th., at 3	Gym.	Ohlson
		M., W., at 3	Gym.	Marsh
		M., F., at 3	Gym.	Marsh
		W., F., at 3	Gym.	Marsh
		Tu., Th., at 4	Gym.	Marsh
		M., W., at 4	Gym.	Ohlson
		M., F., at 4	Gym.	Ohlson
		W., F., at 4	Gym.	Ohlson
		(Hours to be arranged for corrective work.)		
107—	2	Tu., Th., at 3	Ath. House	St. John, Wilce, Castleman
—110	2	M., W., at 11	Ath. House	Wilce
—112	2	Tu., Th., at 4	P. 109	St. John,

PHYSICAL EDUCATION—Continued

For Men

Course No.	Hours	Time	Room	Instructor
125—	2	Tu., F., at 11	Gym.	Wilce, Castleman
—120	2	Tu., F., at 11	Gym.	Nichols, Castleman
—122	2	L., M., at 4	Gym.	Nichols
		Lab., Tu., Th., at 5	Gym.	Marsh

For Women

131—132	1	Tu., at 11; 3 hours to be arranged	Gym.	Breyfogle, Meyer, Hammett
133—134	1	4 hours to be arranged	Gym.	Meyer, Hammett
135—136	3	Tu., Th., 9 and 3	Gym.	Meyer, Hammett

PHYSICS

101—	6	Short courses in Engr., to be arranged	Ph.	Heil
103—104	4	M., W., F., at 8	Ph. 205	Earhart, Smith
		M., W., F., at 3	Ph. 205	Earhart, Smith
		Lab., W., 9 to 11 W., 1 to 3	Ph.	
105—106	4	Tu., Th., at 10	Ph. 205	Blake
		Tu., Th., at 3	Ph. 205	Blake
		Lab., Tu., Th., 8 to 10 Tu., Th., 1 to 3		
107—107	4	Pre-medics; Tu., Th., at 8	Ph. 205	Heil
		Tu., Th., at 1	Ph. 205	Heil
		Lab., Tu., Th., 9 to 11 Tu., Th., 2 to 4		
109—109	3 Agr.	M., W., F., at 8	Ph. 202	Cole
		M., W., F., at 9	Ph. 202	Cole
		M., W., F., at 10	Ph. 202	Cole
		M., W., F., at 1	Ph. 202	Cole
		M., W., F., at 2	Ph. 202	Cole
		M., W., F., at 3	Ph. 202	Cole
111—112	3 Cer.	Tu., Th., at 9; Sat. 8 to 10 (1st Sem.)	Ph. 200, 301	
		M., 2 to 4 (2nd sem.)		
	Civil	Tu., Th., at 10; W., 2 to 4 (1st Sem. only)	Ph. 200, 301	
		Tu., Th., at 2; F., 10 to 12 (1st Sem. only)	Ph. 200, 301	

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
Chem.		M., W., at 1; F., 8 to 10 (1st Sem.)	Ph. 205, 301	
		Tu., 8 to 10 (2nd Sem.)		
Mine		Tu., Th., at 10; Sat. 8 to 10 (1st Sem.)	Ph. 200, 307	
		M., 10 to 12 (2nd Sem.)		
Arch. Engr.		M., W., at 1; Tu., 10 to 12	Ph. 205, 307	
—111	3	To be arranged	Ph.	Cole
113—	5	Mech. { L., M., W., at 10 { Prob., Tu., Th., at 10 { Lab., Th., 2 to 4	Ph. 200 Br. 1	All Instructors
		{ L., M., W., at 1 { Prob., Tu., Th., at 1 { Lab., F., 10 to 12	Ph. 200 Ph. 307	
		Elec. { L., M., W., F., at 9 { Prob., Tu., Th., at 9	Ph. 200 Ph. 307	
		{ L., M., W., F., at 2 { Prob., Tu., Th., at 2	Ph. 205 Ph. 307	
		Gen. { L., M., W., at 1 { Prob., Tu., Th., at 1 { Lab., F., 8 to 10	Ph. 200 Ph. 307	
—114	4	Elec. { L., M., W., at 9 { Prob., Tu., Th., at 9	Ph. 200 Ph. 307	
		Gen. { L., M., W., at 1 { Prob., Tu., Th., at 1	Ph. 205 Ph. 307	
		Elec. { L., M., W., at 2 { Prob., Tu., Th., at 2	Ph. 205 Ph. 205	
115—116	2	To be arranged	Ph.	Earhart, Smith, Heil
117—118	2	(Arch.) Tu., Th., at 1	Ph. 200	All Instructors
—119	3	(Mech.) M., W., F., at 9 M., W., F., at 2	Ph. 205 Ph. 200	
—120	2	To be arranged	Ph.	Cole
121—122	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
123—124	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
—125	5	Civil { L., M., W., at 10 { Prob., Tu., Th., at 10 { Lab., Tu., 2 to 4	Ph. 200 Ph. 301	
		{ L., Tu., Th., at 2 { Prob., M., W., at 2 { Lab., W., 8 to 10	Ph. 200 Ph. 301	
133—	2	(Elec.) M., Tu., 8 to 10	Ph. 100	Earhart, Heil

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		W., Th., 8 to 10	Ph. 100	Earhart, Heil
		M., Tu., 2 to 4	Ph. 100	Earhart, Heil
—134	4 (Elec.)	F., at 10 ; M., Tu., 1 to 4	Ph. 301	Barnett
		M., at 3 ; F., Sat., 8 to 11	Ph. 301	Barnett
		M., at 3 ; W., Th., 8 to 11	Ph. 301	Barnett
135—	5 (Elec.)	Tu., Th., at 1	Ph. 301	Barnett
		Tu., Th., at 3	Ph. 301	Barnett
		Lab., W., Th., 8 to 11		
		F., Sat., 8 to 11		
—136	4	To be arranged	Ph.	
137—	3 to 5	To be arranged	Ph.	
—138	2 (Mech.)	W., Th., 2 to 4	Ph.	Heil, Woodbury
		F., Sat., 8 to 10	Ph.	Heil, Woodbury
139—140	3 to 5	To be arranged	Ph.	Barnett
143—144	3	To be arranged	Ph.	Cole, Earhart
145—146	1	Tu., at 11	Ph. 205	Cole
201—202	3 to 5	To be arranged	Ph.	
207—208	3	To be arranged	Ph.	Smith
215—216	3	To be arranged	Ph.	Barnett

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY
AND PHARMACOLOGY

101—102	3	M., W., F., at 8	Bio. 200	
		M., W., F., at 9	Bio. 100	
		M., W., F., at 10	Bio. 200	
		M., W., F., at 1	Bio. 200	
		M., W., F., at 2	Bio. 200	
		M., W., F., at 3	Bio. 200	
—104	3	Tu., Th., 8 to 11	Bio. 208	Bleile
—106	5	Tu., Th., F., 1 to 4	Bio. 201-8	Bleile, Seymour, Durrant
107—	3	M., W., F., at 9	Bio. 101	Durrant
109—110	3	To be arranged	Bio.	Bleile, Seymour, Durrant
111—112	5	To be arranged	Bio.	Bleile, Seymour, Durrant
114—	3	Tu., 1 ; Th., at 11	Bio. 100	
		Lab., Tu., 2 to 5		
115—	3	M., Tu., F., at 11	Bio. 200	Bleile

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
—118	3	M., Tu., F., at 11	Bio. 200	Durrant
121—122	5	To be arranged	Bio.	Brooks
123—	4	To be arranged	Bio.	Brooks, Seymour
—130	4	To be arranged	Bio.	McPeck
—132	3	M., W., F., at 1 For Pre-Medics	Bio. 101	Bleile
201—202	3	To be arranged	Bio.	Bleile
203—204	5 to 10	To be arranged	Bio.	

POLITICAL SCIENCE

102—	3	M., W., F., at 4	U. 200	Spencer
106—	3	M., W., F., at 10	U. 200	Coker
113—114	2	Tu., Th., at 3	U. 200	Spencer
117—118	2	M., 4 to 6	L. 307	Coker
125—126	3	M., W., F., at 8	L. 303	Spencer
—130	3	M., W., F., at 10	U. 200	Coker
131—132	2	Tu., Th., at 9	U. 200	Coker
133—134	3	M., W., F., at 8	U. 200	
		M., W., F., at 9	U. 200	
		M., W., F., at 2	U. 200	
		M., W., F., at 3	U. 200	
—133	3	M., W., F., at 3	L. 307	Coker
201—202	2	To be arranged		Spencer, Coker

PRINCIPLES AND PRACTICE OF EDUCATION

101—	3	M., W., F., at 10	Ha. 205
		M., W., F., at 2	Ha. 200
104—104	3	Two consecutive hours daily; to be arranged	
105—106	3	Tu., Th., 4 to 5:30	Ha. 101
111—112	3	To be arranged	

PSYCHOLOGY

101—102	3	M., W., F., at 8	U. 400	All Instruc- tors
		M., W., F., at 8	U. 401	
		M., W., F., at 9	U. 401	
		M., W., F., at 9	U. 400	
		M., W., F., at 9	U. 412	
		M., W., F., at 10	U. 400	
		M., W., F., at 10	U. 401	
		M., W., F., at 10	U. 406	
		M., W., F., at 1	U. 400	
		M., W., F., at 1	U. 406	

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 1	U. 412	
		M., W., F., at 2	U. 400	
		M., W., F., at 2	U. 401	
		M., W., F., at 2	U. 412	
		M., W., F., at 3	U. 400	
		M., W., F., at 4	U. 400	
102—101	3	M., W., F., at 3	U. 401	
103—104	3	Tu., Th., at 9	U. 410	Weiss
		Lab., M., 1 to 3		
		W., 1 to 3		
107—108	2	M., F., at 11	U. 400	Pintner
		Tu., Th., at 9	U. 400	Evans
		Tu., Th., at 10	U. 400	
		Tu., Th., at 4	U. 400	Goudge
108—107	2	Tu., Th., at 3	U. 406	
111—112	3	Tu., at 1	U. 415	Weiss
		Lab., Tu., 2 to 4		
		Th., 1 to 3		
—114	2	Tu., Th., at 10	U. 412	Weiss
115—116	2	Tu., Th., at 10	U. 401	Evans
118—	2	Tu., Th., at 10	U. 412	Weiss
121—122	4	M., W., F., at 9; S., 9 to 11	U. 406	Pintner, Bridges
—124	2	Tu., Th., at 9	U. 406	Bridges
125—126	3	M., W., F., at 10	U. 412	Evans
—127	2	M., F., at 11	U. 406	Bridges
128—	2	Tu., Th., at 4	U. 406	Crane
129—130	2	M., W., at 1	U. 410	Arps
133—134	3	M., W., F., 1 to 3	U. 405	Pintner
137—138	2	Th., 4 to 6	L. 309	Arps
139—140	2	M., F., at 11	U. 410	Arps
141—142	2 to 4	To be arranged		Arps, Pintner, Weiss, Bridges
147—148	1 or 2	M., 3 to 5	U.	Pintner, Evans
		W., 3 to 5	U.	Pintner, Evans
		F., 3 to 5	U.	Pintner, Evans
149—150	2	Tu., Th., at 10	U. 406	Bridges
151—152	2	Tu., Th., at 2	U. 406	Crane
155—	2	M., at 11	U. 406	Evans
		Lab., to be arranged		
201—202	3 or more	To be arranged		Arps, Pintner, Weiss

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
203—204	2	Tu., 7 to 9 P. M.	L. 309	Arps Pintner, Weiss
205—206	1	To be arranged		

ROMANCE LANGUAGES

French

101—102	4	M., Tu., W., Th., at 8	U. 303	All Instruc- tors
		M., Tu., W., Th., at 8	H. F. 203	
		M., Tu., W., Th., at 9	H. F. 203	
		M., Tu., W., Th., at 9	H. F. 204	
		M., Tu., W., Th., at 10	U. 303	
		M., Tu., W., Th., at 10	U. 302	
		M., Tu., W., Th., at 1	U. 303	
		M., Tu., W., Th., at 1	U. 302	
		M., Tu., W., Th., at 2	H. F. 204	
		M., Tu., W., Th., at 2	H. F. 203	
		M., Tu., W., Th., at 3	U. 302	
		M., Tu., W., Th., at 4	U. 301	
—101	4	M., Tu., W., Th., at 8	U. 303	Bruce
102—103	4	M., Tu., W., Th., at 3	U. 301	
103—104	4	M., Tu., W., Th., at 8	U. 302	All Instruc- tors
		M., Tu., W., Th., at 9	U. 302	
		M., Tu., W., Th., at 1	H. F. 203	
		M., Tu., W., Th., at 2	U. 303	
		M., Tu., W., Th., at 4	U. 302	
103—	4	M., Tu., W., Th., at 10	H. F. 204	Chapin
—106	4	M., Tu., W., Th., at 10	H. F. 204	Chapin
107—	2	Tu., Th., at 9	U. 209	Cardon
		Tu., Th., at 2	U. 209	Cardon
—108	2	Tu., Th., at 9	U. 209	Cardon
109—110	3	M., W., F., at 9	U. 301	Cardon
		M., Th., F., at 11	U. 301	Bowen
111—112	2	Tu., Th., at 10	U. 202	Bruce
113—114	2	Tu., Th., at 2	U. 205	Bowen, Cardon
119—120	2	Tu., 3 to 5	L. 311	Bowen
—122	2	W., 2 to 4	L. 311	Bowen

Italian

101—102	4	M., Tu., W., Th., at 10	H. E. 321	Guigou
103—104	2	Tu., Th., at 2	U. 201	Bruce

Spanish

Course No.	Hours	Time	Room	Instructor
101—102	4	M., Tu., W., Th., at 8	U. 301	All Instructors
		M., Tu., W., Th., at 8	Ph. 303	
		M., Tu., W., Th., at 9	U. 303	
		M., Tu., W., Th., at 9	Ph. 303	
		M., Tu., W., Th., at 10	Ph. 302	
		M., Tu., W., Th., at 10	U. 410	
		M., Tu., W., Th., at 1	U. 301	
		M., Tu., W., Th., at 2	U. 301	
		M., Tu., W., Th., at 2	Ha. 205	
		M., Tu., W., Th., at 3	U. 303	
		M., Tu., W., Th., at 4	U. 303	
101—	4	M., Tu., W., Th., at 1	Ha. 205	Studler
—101	4	M., Tu., W., Th., at 1	Ha. 205	Hamilton
103—104	4	M., Tu., W., Th., at 10	U. 301	Ingraham
		M., Tu., W., Th., at 1	Ph. 303	Hamilton
103—110	4	M., Tu., W., Th., at 8	U. 410	Chapin
		M., Tu., W., Th., at 2	U. 302	Chapin
107—108	2	Tu., Th., at 9	U. 301	Ingraham

GRADUATE COURSES

Romance Languages

201—202	2	To be arranged		Bowen
203—204	1	To be arranged		Bowen
205—206	2	To be arranged		Bruce
207—208	3 to 10	To be arranged		Bowen
209—210	3 to 5	To be arranged		Ingraham
211—212	2	To be arranged		Ingraham
213—	2	To be arranged		Hamilton
215—216	2	To be arranged		Peirce
217—218	2	M., 3 to 5	L. 311	Bowen

RURAL ECONOMICS

101—101	2	Tu., at 10; W., 1 to 4	Ha. 208	Phillips
		M., at 11; W., 8 to 11	Ha. 208	Falconer
—110	3	M., W., F., at 9	Ha. 208	Lantis

SCHOOL ADMINISTRATION

101—102	3	M., W., F., at 9	Ha. 101	Brown, Clifton
		M., W., F., at 4	Ha. 200	Brown
111—112	3	M., W., F., at 3	Ha. 200	Brown, Clifton
113—114	3	M., W., F., at 2	Ha. 101	Brown

SCHOOL ADMINISTRATION—Continued

Course No.	Hours	Time	Room	Instructor
—116	3	M., W., F., at 10	Ha. 208	Brown
—122	2	Tu., Th., at 10		
123—124	3	M., W., F., at 8		
127—	2	Tu., Th., at 2		
132—	2	Tu., Th., at 3		
201—202	2 to 5	To be arranged		Brown

SHOPWORK

101—101	2	Tu., at 8; Tu., 1 to 4	S.	Beem, Denman, Smith
		Tu., at 10; F., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Tu., at 10; M., 1 to 4	S.	
		Th., at 1; Th., 8 to 11	S.	
		Th., at 3; M., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
103—103	2	Tu., at 8; Tu., 1 to 4	S.	Foust, Wright
		Tu., at 10; F., 1 to 4	S.	
		Tu., at 10; M., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Tu., at 3; M., 8 to 11	S.	
		Th., at 2; Th., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
105—	2	M., at 9; M., 1 to 5	S.	Beem
		Th., at 2; Sat., 8 to 12	S.	
—105	2	M., 1 to 4; Tu., 1 to 3	S.	Beem
107—	2	M., 8 to 10; Tu., 8 to 11	S.	Case
		Tu., 1 to 4; W., 1 to 3	S.	
—107	2	W., 1 to 4; Sat., 8 to 10	S.	Case
109—	2	Tu., 1 to 4; W., 1 to 3	S.	Beem
—109	2	W., 1 to 4; Sat., 8 to 10	S.	Beem
111—	1	W., 8 to 11	S.	Beem
		S., 8 to 11	S.	Beem
—111	1	W., 8 to 11	S.	Beem
113—113	2	M., W., F., 9 to 11	S.	Beem, Smith
		Th., F., 1 to 4	S.	Beem, Smith
115—	2	M., 8 to 10; Tu., 8 to 11	S.	Foust, Wright
		Tu., 1 to 4; W., 1 to 3	S.	Foust, Wright
—115	2	W., 1 to 4; Sat., 8 to 10	S.	Foust, Wright

SHOPWORK—Continued

Course No.	Hours	Time	Room	Instructor
—118	2	To be arranged	S.	Foust
119—	3	M., Tu., 8 to 11	S.	Knight,
		W., Th., 8 to 11	S.	Case
		F., 1 to 4; Sat., 8 to 11	S.	Knight,
				Case
—119	3	W., Th., 8 to 11	S.	Knight,
		M., Tu., 1 to 4	S.	Case
121—	3	M., Tu., 1 to 4	S.	Knight,
		W., Th., 1 to 4	S.	Case
—121	3	M., Tu., 8 to 11	S.	Knight,
		W., Th., 1 to 4	S.	Case
		F., Sat., 8 to 11	S.	Knight,
				Case
123—	2	To be arranged	S.	Knight
125—125	2	To be arranged	S.	Knight
127—127	3	To be arranged	S.	Knight
129—130	3	M., Tu., 1 to 4	S.	Beem,
131—	3	W., 1 to 4; S., 8 to 11	S.	Smith
				Beem,
—133	2	W., 1 to 4; S., 8 to 11	S.	Smith
201—202	5 to 10	To be arranged	S.	Sanborn,
				Knight

ZOOLOGY AND ENTOMOLOGY

Zoology

101—102	3	L., M., W., at 8	B. Z. 67	All Instruc-
		M., W., at 9	B. Z. 67	tors
		M., W., at 10	B. Z. 67	
		M., W., at 1	B. Z. 67	
		M., W., at 2	B. Z. 67	
		M., W., at 3	B. Z. 67	
		Lab., M., 8 to 10	B. Z. 65, 69	
		M., 1 to 3	B. Z. 65, 69	
		Tu., 8 to 10	B. Z. 65, 69	
		Tu., 1 to 3	B. Z. 65, 69	
		Th., 8 to 10	B. Z. 65, 69	

ZOOLOGY AND ENTOMOLOGY—Continued

Zoology

Course No.	Hours	Time	Room	Instructor
		Th., 1 to 3	B. Z. 65, 69	
		F., 8 to 10	B. Z. 65, 69	
		F., 1 to 3	B. Z. 65, 69	
—101	3	Tu., Th., at 3; Sat. 8 to 10	B. Z. 67, 65	
121—122	3 to 5	L., Tu., at 1	B. Z. 111	Kostir
		Lab., Tu., 2 to 4; Th., F., 1 to 4		
129—	2 to 5	M., Th., at 11	B. Z. 67	Barrows
—130	2 to 5	M., Th., at 11	B. Z. 67	Barrows
131—132	3	M., Th., F., at 11	B. Z. 109	Osburn, Krecker
139—140	2	M., at 10; Tu., 1 to 4	B. Z. 207	Hine
141—142	3 to 5	To be arranged	B. Z.	
145—	3	To be arranged	B. Z.	Barrows
153—154	2 to 5	Tu., Th., at 9	B. Z. 67	Barrows
157—158	3 to 5	M., F., 10; W., 1 to 4	B. Z. 111	Krecker
159—160	3 to 5	L., Tu., Th., at 8	B. Z. 209	Krecker
		Lab., to be arranged		
201—202	1	To be arranged		Osburn
223—224	3 to 5	To be arranged		Osburn
241—242	5 to 10	To be arranged		
247—248	5	To be arranged		Osburn

Entomology

107—108	3	L., Tu., Th., at 8	B. Z. 100	Metcalf
		Tu., Th., at 1	B. Z. 67	Metcalf
		Lab., W., 8 to 10	B. Z. 65, 69	Metcalf
		W., 1 to 3	B. Z. 65, 69	Metcalf
—112	3	Tu., Th., at 8	B. Z. 207	Hine
		Lab., Th., 1 to 4	B. Z. 207	
		Sat., 8 to 11	B. Z. 207	
113—114	4	Tu., Th., at 10	B. Z. 109	Metcalf
		Lab., M., W., F., 1 to 4	B. Z. 107	
137—138	3 to 5	Tu., Th., at 10	B. Z. 109	Metcalf
		Lab., M., W., F., 1 to 4		
141—142	3 to 5	To be arranged	B. Z.	
147—	2	Tu., Th., at 10	B. Z. 209	Hine
—148	2	Tu., Th., at 9	B. Z. 109	Osburn
149—150	3 to 5	M., F., at 11	B. Z. 211	Metcalf
		Lab., F., 8 to 11		
151—152	3	Tu., at 11	B. Z. 211	
		Lab., Tu., F., 1 to 4		
155—156	3	M., W., F., at 9	B. Z. 207	Hine
201—202	1	To be arranged		Osburn
241—242	5 to 10	To be arranged	B. Z.	

The Ohio State University Bulletin is issued at least twenty times during the year; monthly in July, August, September, and June, and bi-weekly in October, November, December, January, February, March, April, and May.

The Ohio State University Bulletin

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FEBRUARY, 1918

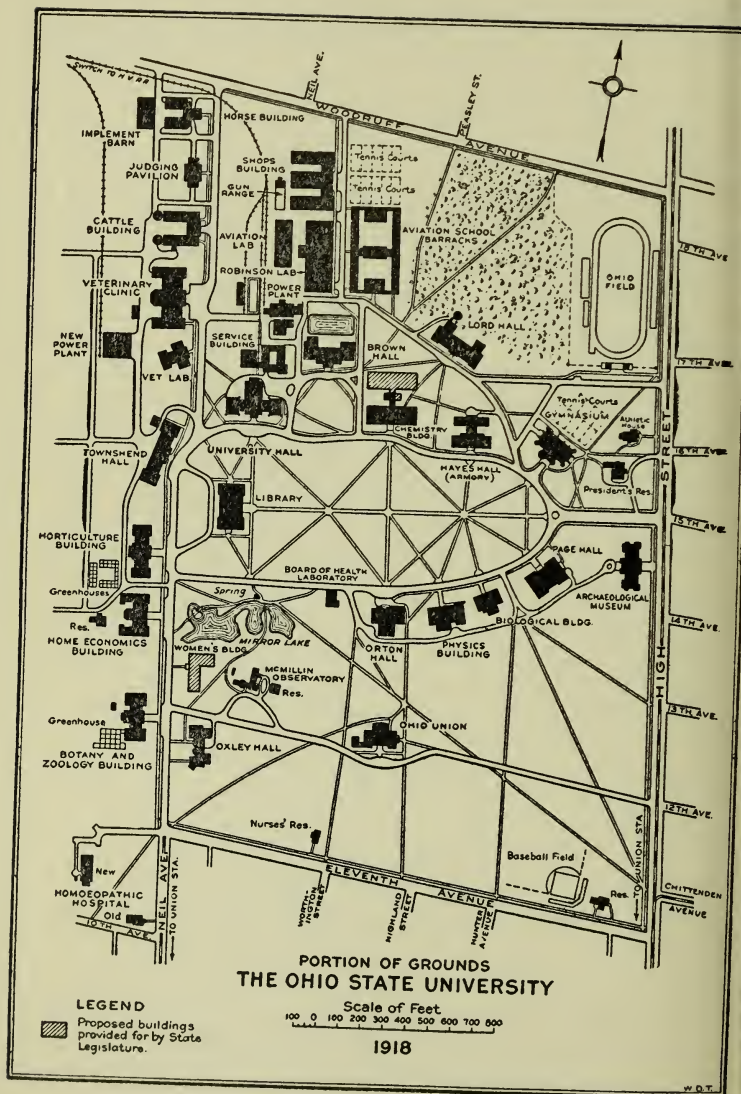
NUMBER 15

COLLEGE OF EDUCATION

1918-1919

PUBLISHED BY THE UNIVERSITY AT COLUMBUS

Entered as second-class matter November 17, 1905, at the postoffice at Columbus, Ohio, under Act of Congress, July 16, 1894.



UNIVERSITY CALENDAR

1918

Entrance examinations, Tuesday to Saturday, June 25 to 29, 8 A. M.

Summer Session, Monday, June 24 to Friday, August 16.

Entrance examinations, Tuesday to Saturday, September 10 to 14, 8 A. M.

Registration Day—First Semester—Tuesday, September 17.

President's Annual Address, Wednesday, September 18, 11 A. M.

Latest date for registration of candidates for a degree at the Commencement of June, 1919, October 1.

Registration Day, Short Courses in Agriculture—First Term—Tuesday, October 15.

Mid-semester reports to the Deans concerning delinquent students, Wednesday, November 20.

Thanksgiving recess begins November 27, 1 P. M., and ends December 3, 8 A. M.

Christmas recess begins Friday, December 20, 6 P. M.

1919

Christmas recess ends Tuesday, January 7, 8 A. M.

Registration Day, Short Courses in Agriculture—Second Term—Tuesday, January 7.

Final examinations, Wednesday, January 22 to Thursday, January 30.

First semester ends Thursday, January 30, 6 P. M.

Farmers' Week, Monday, January 27 to Friday, January 31.

Registration Day—Second Semester—Tuesday, February 4.

Washington's Birthday, Saturday, February 22.

Close of Second Term, Short Courses in Agriculture, Friday, March 21.

Mid-semester reports to the Deans, Saturday, March 22.

Easter recess, Thursday noon, April 10 to Tuesday, April 15, 8 A. M.

Memorial Day, Friday, May 30.

Competitive Drill—Cadet Regiment—Saturday, May 31.

Final examinations, Wednesday, June 4 to Thursday, June 12.

Commencement, Tuesday, June 17.

Entrance examinations, Tuesday, June 24 to Saturday, June 28, 8 A. M.

Summer Session, Monday, June 23 to Friday, August 15.

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COLLEGE OF EDUCATION

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Residence:	104 Fifteenth Ave.—11300
Secretary.....	CHARLES L. ARNOLD
Office:	211 University Hall—99375
Residence:	328 W. Eighth Ave.—16721

COLLEGE OF EDUCATION

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*Absent on leave 1917-1918.

†Absent on leave second semester 1917-1918.

ARTHUR WINFRED HODGMAN, Ph.D.....	314 W. Eighth Avenue
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WILLIAM EDWARDS HENDERSON, Ph.D.....	214 Sixteenth Avenue
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JOSEPH RUSSELL TAYLOR, M.A.....	155 Thirteenth Avenue
<i>Professor of English</i>	
FRANCIS LEROY LANDACRE, Ph.D.....	2026 Iuka Avenue
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†CHARLES A. BRUCE, B.A.....	1981 Indianola Avenue
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*WILLIAM LLOYD EVANS, Ph.D.....	81 South Champion Avenue
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<i>Professor of Romance Languages</i>	

*Absent on leave 1917-1918.

†Absent on leave second semester 1917-1918.

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JOHN WOODWORTH WILCE, B.A.....	70 Twelfth Avenue
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FRANK RILEY CASTLEMAN, B.Sc.....	161 East Frambes Avenue
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LEWIS F. ANDERSON, Ph.D.....	Columbus, R. F. D. No.5
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JOHN F. LYMAN, Ph.D.....	143 Brighton Road
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<i>Professor of Political Science</i>	
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SAMUEL W. BROWN, Ph.D.....	1764 N. High Street
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CLARENCE E. PERKINS, Ph.D.....	1653 Summit Street
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EDGAR TRANSEAU, Ph.D.....	429 West Eighth Avenue
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CHARLES FABENS KELLEY, B.A.....	1951 Summit Street
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ELDON L. USRY, B.M.E., M.A.....	1206 Neil Avenue
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CLYDE BROOKS, Ph.D., M.D.....	213 Fourteenth Avenue
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RAYMOND C. OSBURN, Ph.D.....	337 West Ninth Avenue
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†RUDOLPH PINTNER, Ph.D.....	21 University Court
<i>Professor of Psychology</i>	

*Absent on leave 1917-1918.

†Absent on leave first semester 1917-1918.

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 CHARLES C. MCCrackEN, Ph.D.....192 West Eighth Avenue
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 WILLIAM A. KNIGHT, M.E.....206 West Lane Avenue
Associate Professor of Machine Shop Practice

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Assistant Professor of Romance Languages
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 THEODORE E. HAMILTON, Ph.D.....319 King Avenue
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Assistant Professor of Mathematics
 THOMAS McDOUGAL HILLS, B.Ph.....1942 Iuka Avenue
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*Absent on leave 1917-1918.

†Absent on leave second semester 1917-1918.

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Assistant Professor of Psychology

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- EDWIN P. DURRANT, M.A.....Westerville
Instructor in Physiology
- CLEMENT M. BEEM.....51 West Frambes Avenue
Instructor in Industrial Arts
- HENRY CONRAD OHLSON.....18 Seventeenth Avenue
Instructor in Physical Education
- WILLIAM J. NORRIS.....60 East Eighth Avenue
Instructor in Art

*Absent on leave 1917-1918.

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Instructor in Economics and Sociology
- MARION L. TUCKER, B.Sc.....30 Thirteenth Avenue
Instructor in Home Economics
- CARL GUY DISHONG, M.A.....75 West Tenth Avenue
Instructor in English
- JOHN ELLIS EVANS, Ph.D.....2879 East Avenue
Instructor in Psychology
- GEORGE A. WOOD, M.A.....47 Twelfth Avenue
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- ERWIN O. CHRISTENSEN, B.Sc.....317 West Tenth Avenue
Instructor in Art
- VERA MCCOY MASTERS, M.A.....19 Alhambra Court
Instructor in Bacteriology
- HARRY W. CRANE, Ph.D.....152 East Northwood Avenue
Instructor in Psychology
- LILA SKINNER, M.A.....389 West Tenth Avenue
Instructor in Home Economics
- GRACE G. WALKER, B.Sc.....141 East Woodruff Avenue
Instructor in Home Economics
- MAUDE G. ADAMS, B.Sc. in Edu.....20 Thirteenth Avenue
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- MABEL ENSWORTH GOUDGE, Ph.D.....336 Twentieth Avenue
Instructor in Psychology
- ELMER CULLER, B.A., B.D.....98 East Frambes Avenue
Instructor in Psychology
- CARL WITTKE, M.A.....352 Eighteenth Avenue
Instructor in American History
- MILDRED V. TALBOT, B.A.....212 West Tenth Avenue
Instructor in Art
- ROBERT E. SMITH.....Westerville
Instructor in Manual Training
- GENEVIEVE E. COY, M.A.....61 West Tenth Avenue
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- ALIDA C. BOWLER, M.A.....19 Huston-Fergus Court
Instructor in Psychology

†Absent on leave second semester 1917-1918.

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the city of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called colleges. The Ohio State University comprises eleven colleges and a graduate school, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Engineering
College of Agriculture	College of Homoeopathic
College of Arts, Philosophy and Science	Medicine
College of Commerce and Journalism	College of Law
College of Dentistry	College of Medicine
College of Education	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a Director and governing committee for the administration of the regular University courses offered in the summer.

This bulletin is devoted exclusively to the work of the College of Education for the academic year, 1918-1919.

(NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing L. E. Wolfe, Secretary of the Entrance Board, Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.)

COLLEGE OF EDUCATION

This college is one of the officially approved instrumentalities of the State for the professional training of teachers, as provided in the school laws of this State. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the college is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this college leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Manual Training, Home Economics, Agricultural Education, Agricultural Chemistry, American History, Anatomy, Bacteriology, Biblical Literature, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

PHYSICAL EDUCATION

Provision has been made by the College of Education to meet the increasing demand in the public schools for directors and teachers of physical education, and for athletic coaching. Regu-

lar students in the college preparing for high school teaching may include in their curriculum Physical Education as a "minor subject" and receive credit for it towards their degree. The minor consists of twelve semester hours in addition to the courses required of first and second year students. In each case the approval of the Head of the Department of Physical Education and of the Dean of the college must be obtained.

For further details see the courses as announced on page 91.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Secretary of the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two summer sessions are considered the equivalent of one semester and four summer sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this College. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school teachers' certificate, without examination. This certificate, obtainable from the State Superintendent of Public Instruction on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Manual Training, in Art or in Agricultural Education are also entitled, without further examination, to a state provisional special certificate valid for four years, in the appropriate one of the above

lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

PROFESSIONAL SUBJECTS

Pursuant to the present School Code of Ohio the State Superintendent of Public Instruction has designated the subjects which are accepted and treated as professional subjects in the training of teachers and which must be included within the minimum of thirty semester hours required of all applicants for state high school provisional or life certificates.

The subjects are, General Psychology, Educational Psychology, History of Education, Principles of Education (or Science of Education), School Administration, Methods of Teaching, either general or special, and Supervised Practice Teaching.

Work in each of the foregoing subjects is absolutely required of all applicants for such certificates. In addition to the above, under certain conditions, Experimental Psychology, Sociology and Philosophy may be counted, if needed, to make up the necessary thirty hours.

The various curricula in the College of Education include all of the subjects necessary to meet the foregoing provisions.

GENERAL INFORMATION

RESERVE OFFICERS' TRAINING CORPS

Under the Defense Act of June 3rd, 1916, there was established at the Ohio State University a Reserve Officers' Training Corps to which all students are eligible who have completed the requirements in Military Drill for the first and second years. Students entering the Reserve Officers' Training Corps are required to complete a practical and theoretical course in Military Science extending through the Junior and Senior years of residence. When this requirement is completed the President of the United States will grant them a commission as Second Lieutenant in the Officers' Reserve Corps when recommended by the Commandant of Cadets and the President of the University.

During this two years of required work the United States will furnish to the student one complete uniform each year and one ration which is commuted at 30 cents per day during the fiscal year.

APPOINTMENT COMMITTEE

In order to serve the schools of the state, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Secretary, Mr. L. E. Wolfe. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the Committee.

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of thirty-five dollars is offered for the best essay on the

principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the Head of the Department of American History.

FEES AND EXPENSES

All fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until fees are paid.

Incidental Fee—The fee for all students is fifteen dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit of ten dollars for each course requiring such supplies is made at the Bursar's office before the work is begun. All laboratory supplies are sold at the General Store Room, Chemistry Hall, to students at first cost to the University, and charged against the deposits. Any unused part of the deposit is refunded at the end of the semester.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

Cadet Uniform. The uniform with which the members of the regiment are required to provide themselves costs (without overcoat) about twelve dollars. It is quiet in pattern, and may be worn in place of civilian dress. New students are advised against buying second-hand uniforms unless they have been previously inspected and approved by the Commandant. Inspection has shown in many cases that second-hand uniforms were unfit to wear and certainly not worth the price asked for them. All such uniforms are subject to rejection by the Com-

mandant. Students should not arrange for uniforms until so directed by the military authorities.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid on or before the last Friday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Text-books. Students should not purchase text-books until they are advised by the instructors of their respective classes.

EXPENSES PER YEAR

One of the most preplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost for the freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Incidental fee	\$ 30.00
Ohio Union	2.00
Gymnasium locker	4.00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	20.00
Cadet uniform, gloves and shirt	15.00
Books	15.00
Board—36 weeks at \$3.50 per week.....	126.00
Room rent, at \$8.00 per month.....	72.00
General expenses	100.00

\$384.00

The item of general expenses is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

In order to meet all the necessary expenses of registration, books, uniform, and other expenditures incident to securing a room and board, a student should come prepared to expend from sixty-five to seventy-five dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.

WOMEN STUDENTS

As far as possible women students should make arrangements for room and board in advance. An effort will be made to secure suitable accommodations in private residences for such as cannot be accommodated in Oxley Hall. Prospective women students should address Miss Caroline Breyfogle, Dean of Women, The Ohio State University, Columbus, Ohio.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$300 for the academic year and in addition all fees are remitted, except a diploma fee, for those students who receive degrees. At present there are such assistantships in Agricultural Chemistry, American History, Bacteriology, Botany, Chemistry, Economics, English, Geology, German, Mathematics, Physics, Psychology, Romance Languages, Zoology, and a few others in technical and professional colleges. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$250 with exemption from all fixed fees. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applications not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

ADMISSION

The College is open on equal terms to both sexes.

Applicants for admission must be at least sixteen years of age.

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, a student must be a graduate of a high school of the first grade or receive credit by examination for fifteen entrance units.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language and four as choice may direct. If this work is not pre-

sented for entrance, the student's progress may be retarded, as he will be required to carry courses in the University to make up the deficiency and he may not be able to obtain a degree in the usual four years.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, manual training, home economics, and agriculture.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

GENERAL COURSE

The work of the first two years must include:

(a) English

- (a) English 101 and 104 (2-2) 4 hours
English 133 and either English 141, 142,
145 or 146 (3-3) 6 hours
English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency.

(b) Languages

- (b) One of the following languages which must be pursued through both the first and second years: (4-4-4-4) 16 hours
Greek, Latin, French, German, Spanish.
The second year will not be required of students who offer six entrance units in foreign language.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) Mathematics

- (c) Mathematics 121-122: (3-3) 6 hours, or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study.

Every student must secure credit either in high school, or in the college for algebra through quadratics, and for plane geometry.

(d) Science

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104

Chemistry 105-106 or 109-110

Geology 101-102

Astronomy 101-102

Biological:

Physiology 101-102

Zoology 101-102

Botany 101-102

Every student is required to take one of the above sciences in college, and every student is also required to have either entrance or college credit for both a biological and a non-biological science. Students who enter without one unit in physics or in chemistry must take one of these subjects in college. Students who enter without one unit in zoology or in botany must take a biological science in college. Students who

have entrance credit for one unit in physics or chemistry and one unit in zoology or in botany must take a science in college.

(e) History

(e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one unit of history for entrance the requirement is twelve semester hours.

(f) Psychology (3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education, not less than 6 hours

Elements of Sociology, not less than 6 hours

Educational Psychology, not less than 4 hours

The Principles and Practice of Teaching, 6 or 9 hours

School Administration, 3 or 6 hours

A course in the teaching of the major subject, not less than 2 hours

(2) Major Courses

The work which the student is preparing to teach (selected in the first or second year)—hours enough, usually thirty semester hours, to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps, (as defined in General Order No. 49 as may be amended in the future by the War Department) the total number of hours required in the General Course for the degree of Bachelor of Science in Education is 112 (instead of 120) semester hours, in addition to the work in military training and physical education. For the other curricula in the College of Education a like reduction of eight hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

CURRICULA

GENERAL COURSE

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Group (b)	4	Group (b)	4
Group (c) or elective	3	Group (c) or elective	3
Group (d)	4	Group (d)	4
Group (e)	3	Group (e)	4
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Group (b)	4	Group (b)	4
Major Work	5	Major Work	5
Military Drill	1	Military Drill	1
Physical Education (women)	1	Physical Education (women)	1

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
History of Education	(101) 3	History of Education	(102) 3
Educational Psychology	(107) 2	Educational Psychology	(108) 2
Major Work	5	*Major work	5
Correlated Work	2	Correlated Work	2

FOURTH YEAR

Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
or		School Administration	
Principles and Practice of Education	(104) 3	(102) or (112)	3
School Administration		Major Work	5
(101) or (111)	3	Elective	4
Major Work	5		
Elective	4		

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

*NOTE: Principles of Education (101) 3 hours may be taken in the second semester and 3 hours of major work postponed until the fourth year.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, exclusive of the requirement in military drill and physical education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units or less than three, of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the biological science required in the curriculum.

Students who enter without one unit in history, must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 3	Botany	(102) 3
European History	(101) 3	European History	(102) 3
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Drill	1	Military Drill	1

For Students Majoring in Drawing

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 2
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(135) 4
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	3	Elective	2

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

For Students Majoring in Design

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(134) 2
Art	(142) 3	Art	(143) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	3

FOURTH YEAR

First Semester		Second Semester	
History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(135) 4	Art	(144) 3
Art	(117) 3	Art	(145) 3
School Administration	(101) 3	Elective	3

For Students Majoring in History and Appreciation of Art

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(155) 2
Art	(154) 2	Art	(156) 2
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(157) 3	Art	(158) 5
Art	(117) 3	Elective	4
School Administration	(101) 3		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units and less than three of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics must take this subject in addition to the science requirements of the course.

Students who enter without one unit in history, must take at least six semester hours, of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester

Chemistry	(105 or 109)	4
English	(101)	2
Zoology	(101)	3
French or German		4
Home Economics	(111)	2
Physical Education		1

Second Semester

Chemistry	(106 or 110)	4
English	(104)	2
Zoology	(102)	3
French or German		4
Home Economics	(112)	2
Art	(119)	1
Physical Education		1

SECOND YEAR

Chemistry	(127)	4	Agricultural Chemistry	(123)	4
Home Economics	(101)	5	Home Economics	(102)	5
Physiology	(101)	3	Physiology	(102)	3
French or German		4	French or German		4
Physical Education		1	Physical Education		1

THIRD YEAR

Psychology	(101)	3	Psychology	(102)	3
Economics	(101)	3	Economics	(102)	3
Bacteriology	(107)	4	Home Economics	(108)	2
Art	(131)	2	Home Economics	(104)	3
History of Education	(101)	3	Art	(141)	2
			History of Education	(102)	3

FOURTH YEAR

Sociology	(101)	3	Sociology	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Home Economics	(118)	3	School Administration		3
School Administration	(101)	3	or		
Elective		4	Principles of Education	(102)	3
			Home Economics	(119)	3
			Elective		4

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

MANUAL TRAINING

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects in addition to the requirement of the course. Students who enter without one unit in zoology or in botany, must take a biological science. Students who enter without one unit in history, must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Manual Training and the Dean of the College of Education.

MANUAL TRAINING

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Art	(119) 1	Art	(141) 2
Art	(131) 2	Manual Training	(125) 2
Engineering Drawing	(139) 4	Engineering Drawing	(140) 3
Foreign Language	4	Foreign Language	4
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Foreign Language	4	Foreign Language	4
Psychology	(101) 3	Psychology	(102) 3
Manual Training	(127) 3	Manual Training	(128) 3
Shopwork	(105) 2	Shopwork	(115) 2
Military Drill	1	Military Drill	1
Elective	2 or 3	Elective	2 or 3

THIRD YEAR

Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
or		or	
Physics	(103 or 105) 4	Physics	(104 or 106) 4
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Manual Training	(117) 2	Manual Training	(118) 2
Shopwork	(119) 3	Manual Training	(129) 2
Elective	2 to 4	Elective	3 or 4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Manual Training	(111) 3	Manual Training	(112) 3
Principles and Practice		Principles and Practice	
of Education	(101) 3	of Education	(104) 3
School Administration	(101) 3	Elective	6 to 9
Elective	3 to 6		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

AGRICULTURAL EDUCATION

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects, in addition to the requirement of the course.

Students who enter without one unit in zoology or in botany, must take a biological science in addition to the requirement of the course.

Students who enter without one unit in history, must take at least six semester hours of either American or European history.

AGRICULTURAL EDUCATION

FIRST YEAR

First Semester		Second Semester	
School Administration	(123) 3	School Administration	(124) 3
Elements of Agriculture		Elements of Agriculture	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
Rural Economics	(101) 2	Engineering Drawing	(125) 2
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

Economics	(101) 3	Economics	(102) 3
Psychology	(101) 3	Psychology	(102) 3
Zoology	(101) 3	Zoology	(102) 3
Botany	(101) 3	Botany	(102) 3
Animal Husbandry	(135) 4	Horticulture	(156) 2
Military Drill	1	Military Drill	1

THIRD YEAR

History of Education	(101)	3	History of Education	(102)	3
Horticulture	(101)	4	Horticulture	(120)	4
Dairying	(101)	4	Agricultural Engineering	(101)	4
Animal Husbandry	(137)	3	Horticulture	(184)	4
Elective		2			

FOURTH YEAR

School Administration	(127)	2	School Administration	(122)	2
Principles of Education	(101)	3	Principles of Education	(104)	3
Zoology	(107)	3	Zoology	(108)	3
Geology	(151)	3	Farm Crops	(101)	4
School Administration	(101)	3	Elective		3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credit for one hundred and forty hours, exclusive of the requirement in military drill and physical education, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.

Students registered for this combined Arts-Education curriculum must ordinarily expect to use at least one summer session in addition to the four years to complete the work.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN, LYMAN AND BEAR, ASSISTANT PROFESSOR
T. G. PHILLIPS, MR. HUTCHISON, MR. McCLURE, MR.
CONREY, AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. Household Chemistry. Four credit hours. Second semester. Home Economics. Prerequisite, Chemistry 106 or 110. Mr. Lyman, Mr. Phillips.

Lectures on household chemistry. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods and other materials of household interest.

SOILS

152. Elementary Soils. Five credit hours. Second semester. Two lectures, one quiz and six laboratory hours each week. Prerequisite, Agricultural Chemistry 103. Mr. Vivian, Mr. Bear.

An introductory course on the origin and the chemical and physical properties of soils, their management and fertilization.

AGRICULTURAL EDUCATION

(See School Administration)

AGRICULTURAL ENGINEERING

Office, 205 Home Economics Building

PROFESSOR RAMSOWER, ASSISTANT PROFESSOR IVES, MR. McCUEN,
MR. POTTER

101. Farm Engineering. Four credit hours. Either semester. Prerequisite, Engineering Drawing 125. Mr. Ramsower, Mr. Potter.

Lectures and recitations on the laying out and equipment of the farm, and a detailed study of farm power, water supply,

and farm machinery. Practice in the comparison and testing of farm machines, handling concrete, rope splicing and in the working out of problems in farm mechanics.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT AND HOCKETT, ASSISTANT PROFESSOR A. M. SCHLESINGER, MR. WOOD, MR. WITKE

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), courses 101-102 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher, 101-102, 103-104, 119, 128, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 133-134 and Economics 101-102 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1916). Three credit hours. The year. Mr. Hockett, Mr. Schlesinger, Mr. Wood, Mr. Wittke.

American History 101 is given also during the second semester, and American History 102 in the first semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases receive chief attention. The first semester covers the period 1763-1829. The second semester covers the period 1829-1916. Text-book, discussion, and collateral readings. This course must precede all other courses in American history, except 125-126.

128. The History of Ohio. Two credit hours. Second semester. Prerequisite, American History 101-102. Mr. Hockett.

The settlement and early development of the state will be surveyed rapidly, and more intensive study given to the period since 1850. Lectures, discussion and reports.

***107. Formation of the Constitution.** Two credit hours. First semester. Prerequisite, American History 101-102. Political Science 133 will be found a valuable adjunct to this course. Mr. Hockett.

*Not given in 1918-1919.

Beginning with a brief study of the constitutional ideas of Americans in the revolutionary period, the course traces the formation of the federal constitution by the convention of 1787, and discusses the constitutional problems involved in the establishment of the government. Lectures, discussion and reports.

***108. Constitutional History of the United States.** Two credit hours. Second semester. Prerequisite, American History 101-102. American History 107 affords a good foundation, and Political Science 133 a valuable adjunct. Mr. Hockett.

The chief controversies over the interpretation of the constitution and the effects of these controversies upon the evolution of the American constitutional system. Such questions are dealt with as the acquisition of territory, internal improvements, the tariff, slavery, and the relations of the nation and the states. Lectures, discussion and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102. Mr. Schlesinger.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1916). Two credit hours. Second semester. Prerequisite, American History 101-102. American History 109 affords a good foundation. Mr. Schlesinger.

The development of national parties in the period from 1852 to the re-election of Woodrow Wilson, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion and reports.

***103-104. The American Colonies, 1600-1783.** Three credit hours. The year. Prerequisite, American History 101-102. Mr. Wood.

*Not given in 1918-1919.

The general history of the English colonies in America, with especial emphasis on European conditions affecting colonization, the development of government in the several colonies, and relations with the mother country, including the struggle for independence. Lectures, discussion and reports.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American history.

119. Introduction to Historical Research. Two credit hours. First semester. Prerequisite, four semesters in American history. Mr. Hockett.

Drill in finding historical material by the use of standard guides, manuals, and catalogs, followed by practice in criticising material, and exercises in historical composition. Each student then applies what has been learned by preparing an essay. Attention is given throughout to approved forms for note-taking, citation of authorities, etc. Designed especially for students who expect to teach American history in secondary schools, or to pursue graduate work in this field.

111. The Slavery Struggle in the United States. Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

112. Reconstruction and its Results, 1863-1915. Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Schlesinger.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

***113. American Diplomacy to the Close of the Civil War.** Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussion and reports.

***114. Problems of American Diplomacy Since the Civil War.** Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Knight.

Problems in the diplomacy of the United States, resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussion and reports.

***130. Contemporary Accounts of American Life and Institutions.** Three credit hours. Second semester. Given biennially. Prerequisites, American History 101-102, and at least two other semesters in American history. Mr. Schlesinger.

A critical study of the chief descriptions, criticisms and interpretations of American life and manners at different periods, written contemporaneously with the times discussed. Particular attention is given to the accounts by William Cobbett, the Trollopes, Harriet Martineau, De Tocqueville, Dickens, Chevalier, Charles Lyell and James Bryce.

121. The Teaching of American History. Two credit hours. First semester. Given biennially. Mr. Knight.

Lectures, reading and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment,

*Not given in 1918-1919.

examination of text-books; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

123-124. Recent History of the United States, 1870-1915. Three credit hours. The year. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Economics 101-102 will be found a valuable adjunct to this course. Mr. Knight.

An intensive study of the political, constitutional, industrial and social life of the nation and the state during the past generation; it includes a consideration of new applications of the constitution, industrial development, territorial expansion, the entry of the United States into the world politics, third party movements, and the rise of the new democracy. Lectures and individual investigations.

FOR GRADUATES

***203-204. The United States and Latin-America, 1800-1905.**

205-206. Seminary in American History.

209. History of the Westward Movement to 1812.

210. History of the Westward Movement since 1812.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANATOMY

Office, 105 Biological Hall

PROFESSOR LANDACRE, ASSISTANT PROFESSORS BUCK AND WARREN, MR. KNOUFF, MR. BAKER

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to

*Not given in 1918-1919.

eight laboratory hours each week. Not open to first year students. Mr. Baker.

Fishes, amphibians and reptiles.

102. Comparative Anatomy of the Vertebrates. Three or five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101, or an equivalent. Mr. Baker.

Birds and mammals.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Landacre.

The histology and early development of the frog.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisite, one year of biological science. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisites, one year of biological science. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

116. The Digestive System. Three credit hours. Second semester. One lecture and four laboratory hours each week. Elective for third or fourth year students. Prerequisite, one year's work in biological science. Mr. Landacre, Mr. Buck, Mr. Warren.

A study of the gross and microscopic structure of the digestive system and associated organs in one of the higher mammals and in man.

118. Elementary Comparative Anatomy of Vertebrates. Three to five credit hours. One lecture and five to eight laboratory hours each week. Required of students in the Arts-Medicine and Science-Medicine courses. Prerequisites, Zoology 101, Physiology 101 or an equivalent. Mr. Landacre, Mr. Knouff, Mr. Baker.

A preliminary study of the comparative anatomy and embryology of the vertebrates accompanied by careful dissections of the shark, frog and cat. This course meets the premedical requirements in Anatomy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Comparative Neurology. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates.

110. Comparative Neurology. Three to five credit hours. Second semester. One lecture or conference and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

FOR GRADUATES

201-202. Vertebrate Embryology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANIMAL HUSBANDRY

Judging Pavilion

PROFESSORS PLUMB AND KAYS, ASSISTANT PROFESSOR COFFEY

135. Elementary Live Stock Judging. Four credit hours. Either semester. Second year. Two lectures and four laboratory hours each week.

Students intending to give much attention to animal husbandry courses should take this course the first semester. Students taking but one course in animal husbandry are required to take this.

An elementary study of the relationship of form to function in horses, cattle, sheep and swine.

137. Principles of Feeding. Three credit hours. Either semester. Second year. Prerequisite, Animal Husbandry 135 and Agricultural Chemistry.

An elementary study of digestion and assimilation, feeding standards, composition of feeding stuffs and feeding practices.

ART

Office, 201 Horticulture Building

PROFESSOR KELLEY, ASSISTANT PROFESSOR ROBINSON,
MR. NORRIS, MR. CHRISTENSEN, MISS TALBOT

131-132. Elementary Drawing. Two credit hours. The year. This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also in the second semester.

Art 132 is given also in the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133.

135. Illustrative Drawing. Four credit hours. Either semester. Prerequisite, Art 134.

Different methods of drawing for illustration.

136. Water Color Painting. Two credit hours. Either semester. Prerequisite, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. **Advanced Water Color.** Three credit hours. Second semester. Prerequisite, Art 136.

138. **Oil Painting.** Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. **Advanced Oil Painting.** Three credit hours. Second semester. Prerequisite, Art 138.

Painting from the costume model.

141. **Elementary Design.** Two credit hours. Either semester. Prerequisite, Art 131 and 119.

The principles of the theory and practice of design.

142. **Advanced Design.** Three credit hours. Either semester. Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. **Specialized Design.** Three credit hours. Second semester. Prerequisite, Art 142.

Field to be chosen by the student.

144. **Commercial Design.** Three credit hours. Second semester. Prerequisite, Art 142.

This course is aimed to give a grasp of commercial design problems.

145. **Thesis Work Design.** Three credit hours. Second semester. Prerequisite, Art 143.

This course is required of students graduating in design.

151. **History of Classic Art.** Three credit hours. Either semester. Not open to first year students.

The study of classic art with some consideration of the art of Egypt, Assyria, and Persia. Reading and reports.

152. **History of Medieval Art.** Three credit hours. Second semester. Prerequisite, Art 151. Not open to first year students.

Reading and reports.

153. History of Renaissance and Modern Art. Three credit hours. First semester. Prerequisite, Art 151. Not open to first year students.

From the beginning of the Renaissance in Italy to the present time. Reading and reports.

160. Modern Painting and Sculpture. Three credit hours. Second semester. Three lectures a week and occasional reports. Mr. Kelley.

This course will deal with the art of the last two centuries, laying particular stress upon the development in France, England and the United States.

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments and observations.

119. Appreciation of Art. One credit hour. Either semester.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141. Miss Talbot.

Art in dress; the direct application of design principles and color harmony to dress.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

154. Greek Sculpture. Two credit hours. First semester. Prerequisite, Art 151. Mr. Christensen.

Reading and short thesis.

155. The Italian Schools of Painting. Two credit hours. Second semester. Prerequisite, Art 151, 152, 153. Mr. Christensen.

Reading and short thesis.

156. The Netherlandish Schools of Painting. Two credit hours. Second semester. Prerequisites, Art 151, 152, 153. Miss Robinson.

Reading and short thesis.

157. Art of China and Japan. Three credit hours. First semester. Prerequisite, junior standing and at least two other courses in this department. Mr. Kelley.
Reading and reports.

158. Thesis in Art History. Five credit hours. Second semester. Prerequisite, fifteen hours of art history. Mr. Kelley.
This course is required of students graduating in art history.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. General Astronomy. Three credit hours. The year. Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. Astronomy, Geodesy and Least Squares. Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. Advanced Astronomy. Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSOR MORREY, ASSISTANT PROFESSOR STARIN, MR. FRONING, MRS. MASTERS, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in bacteriology are open to advanced undergraduates and graduate students only, not to freshmen or sophomores. The instructor in charge must be consulted before electing.

107. General Bacteriology. Four or five credit hours. First semester. Mr. Morrey, Mr. Froning, Mrs. Masters, and department assistants.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The

lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mr. Froning, Mrs. Masters.

A study of the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the methods and devices used in these processes and of the organisms concerned. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

116. Bacteriological Chemistry. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Froning.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

119-120. Pathogenic Protozoa. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmoses, and spirochaetoses.

125-126. Special Problems in Bacteriology. Three to five credit hours. The year. Conferences, library and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

BIBLICAL LITERATURE, HISTORY AND EXEGESIS

Office, 201 Home Economics Building

PROFESSOR BREYFOGLE

101. Biblical Literature. Three credit hours. First semester. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the literature, history and religion of the Old Testament. A general course touching upon the historical crises of the Old Testament with an attempt to recreate the political, economic and social conditions as a basis for the better understanding of the moral and religious teachings. A stereopticon will be used, showing the latest discoveries in Palestine, Egypt and Assyria, which bear upon the period.

102. Historical Christianity in Outline. Three credit hours. Second semester. Miss Breyfogle.

A consideration of Judaism, of the life, work and teachings of the Founder of Christianity, and of Apostolic teaching.

Intended to give the student a systematic knowledge of the New Testament in its historical setting. The relation of Christianity to Hellenistic Judaism, the teachings of Jesus as shown by a comparison of the gospels, and the expansion of Christianity throughout the world during the Apostolic times. Stereopticon views will be freely used and an endeavor made to familiarize the student with the text.

***103-104. The History of Religion in Outline.** Three credit hours. The year. Lectures, quiz and reports. Miss Breyfogle.

A consideration of the great book religions of the world.

*Not given in 1918-1919.

BIBLIOGRAPHY

Office, The Library

MISS JONES, MR. REEDER

101-102. The Library and the School. One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS SCHAFFNER AND TRANSEAU, ASSISTANT PROFESSORS
GRIGGS AND STOVER, MISS DETMERS, MR. SEARS, MR.
SAMPSON, AND DEPARTMENT ASSISTANTS

101-102. General Botany. Three credit hours. The year. Two recitations and two laboratory hours each week. Mr. Griggs, Mr. Stover, Miss Detmers, Mr. Sears, Mr. Sampson.

A study of the structures and processes of plants, and their relation to the environment. A general survey of the great plant groups.

107. Plant Histology. Two credit hours. First semester. One lecture and two laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

The physical structure and properties of protoplasm are studied; then, in order, the cell, the tissues, tissue systems and finally the histological structure of the plant organs are taken up.

108. Ecological Anatomy. Two credit hours. Second semester. One lecture and two laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

A study of plant structures in relation to environment.

110. General Dendrology. Two credit hours. First semester. One lecture and two laboratory hours each week. Mr. Griggs.

Text-book: Schaffner's Field Manual of Trees.

A study of trees and shrubs, with practice in the identification of woody plants, in both summer and winter condition. Students are required to prepare a dendrological herbarium.

120. Field Botany. Three credit hours. Second semester. One field trip and two laboratory hours each week. Prerequisite, Botany 101. Mr. Griggs.

Field and laboratory study of the local flora. A large share of the time is spent in practice in the identification of the plants native to central Ohio.

123. Morphology of Lower Plants. Four credit hours. First semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of algae, fungi, and bryophytes.

124. Morphology of Vascular Plants. Four credit hours. Second semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of ferns and seed plants.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisite, Botany 101-102 and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory and field work, with practice teaching under supervision.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

117-118. **Plant Ecology.** Three credit hours. The year. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Transeau.

The ecological relations of the forests, prairies, and deserts of North America. Field work on the local plant associations.

127-128. **Plant Pathology.** Four credit hours. The year. Two lectures and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Stover.

129-130. **Systematic Botany.** Three to five credit hours. The year. Prerequisite, Botany 101-102 and one additional year of some biological subject. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phyletic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

133-134. **Minor Investigations.** Three to five credit hours. The year. Prerequisite, Botany 101-102 and one additional year of some biological subject. Mr. Schaffner, Mr. Transeau, Mr. Griggs, Mr. Stover, Miss Detmers, Mr. Sampson.

135-136. **Evolution of Plants.** One credit hour. The year. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Schaffner.

The progress of evolution in the plant kingdom with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

FOR GRADUATES

201-202. **Research in Systematic Botany.**

203-204. **Research in Morphology and Cytology.**

205-206. **Research in Physiology and Ecology.**

207-208. **Research in Mycology and Plant Pathology.**

209-210. **Seminary in Botany.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

CHEMISTRY

Office, 100 Chemistry Hall

PROFESSORS McPHERSON, HENDERSON, FOULK, WILLIAM L. EVANS,
AND WITHROW, ASSISTANT PROFESSORS BOORD AND OLIN,
MR. YOUNG, MR. DAY, MR. ADKINS, MR. COITH,
AND DEPARTMENT ASSISTANTS

105. Elementary Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Young, Mr. Day, Mr. Adkins and department assistants.

A general course on the chemistry of the non-metals, arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Chemistry 106, second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 105. Mr. Evans, Mr. Young, Mr. Day, Mr. Adkins, and department assistants.

A general course on the chemistry of the metals. The laboratory work accompanying is a general introductory course in qualitative analysis.

109. General Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Young, Mr. Day, Mr. Adkins, and department assistants.

A general course on the chemistry of the non-metals. It is more advanced than Chemistry 105 and is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Chemistry 110, second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 109. Mr. Evans, Mr. Young, Mr. Day, Mr. Adkins and department assistants.

A general course on the chemistry of non-metals. It is more advanced than Chemistry 106. The laboratory work is a general course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. Prerequisite, Chemistry 106 or 110. Mr. Henderson, Mr. Mellon.

A course of fundamental topics in the field of advanced general chemistry.

117. Qualitative Analysis. Three credit hours. First semester. One lecture and six laboratory hours each week. Prerequisite, an acceptable course in general chemistry. Mr. Olin.

An elementary course in qualitative analysis. Similar to Chemistry 106 and 110 and is arranged for students with advanced standing who have had no qualitative analysis.

119-120. Quantitative Analysis. Four credit hours. The year. One lecture, nine laboratory hours each week. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 106 or 110 or equivalent. Mr. Foulk, Mr. Olin, Mr. Hollingsworth.

Elementary principles of gravimetric and volumetric analysis, with typical analytical methods. This course must be accompanied by Chemistry 124, except by special permission of the instructor. It is also desirable that it be accompanied by Chemistry 113-114.

124. Chemical Problems. One credit hour. Second semester. Mr. Foulk, Mr. Hollingsworth.

Extended practice in the solution of problems pertaining to gravimetric and volumetric analysis. This course is arranged to accompany Chemistry 119-120.

127. Organic Chemistry. Four credit hours. First semester. Three lectures, one quiz each week. Prerequisite, an acceptable course in general chemistry. Mr. Boord.

This is a general introductory course in organic chemistry.

151-152. Organic Chemistry. Two credit hours. The year. Prerequisite, Chemistry 109-110, 113-114 and 119-120, except by special permission of the instructor. Mr. McPherson.

Lectures in organic chemistry.

153-154. Organic Chemistry. Two or three credit hours. The year. Six or nine laboratory hours each week. Laboratory

open afternoons. This course must be accompanied or preceded by Chemistry 151-152. Mr. McPherson, Mr. Boord.

The preparation of typical organic compounds.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157-158. Physical Chemistry. Three credit hours. The year. Prerequisite, Chemistry 113-114, 119-120 and 151-152, except by special permission of the instructor. Mr. Henderson.

This is a general course in physical chemistry.

161. Physical Chemistry. Two or three credit hours. Either semester. Six to nine laboratory hours each week. Prerequisite or concurrent, Chemistry 157-158. Mr. Henderson, Mr. Mellon.

An elementary course in physico-chemical measurements, including such topics as molecular weights and conductivity.

187. Inorganic Preparations. Three credit hours. Either semester. One recitation and six laboratory hours each week. Laboratory open afternoons. Prerequisite, Chemistry 114 and 120. Mr. Henderson, Mr. Mellon.

The preparation of a limited number of compounds chosen so as to give practice in the preparation of inorganic compounds.

132. The Teaching of Chemistry. Two credit hours. Second semester. Two recitations or conferences each week. Elective. Prerequisite, Chemistry 105-106 (or 109-110), 119, 151-152. Mr. McPherson.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

PROFESSOR BOLLING, ASSISTANT PROFESSOR BARROWS

***197. English Sounds for Foreigners.** Two credit hours. First semester. No prerequisite. Miss Barrows.

The object of this course is to give the student fluency and accuracy in the use of English sounds, by means of a detailed comparison of the sounds in the native language of the student with those of English; exercises in articulation, adapted in each case to the individual needs of the student; practice in reading aloud.

*Not given in 1918-1919.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

195. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

DAIRYING

Office, 111 Townshend Hall

PROFESSOR ERF, ASSISTANT PROFESSORS CUNNINGHAM
AND STOLTZ, MR. JIMISON

101. Principles of Dairying. Four credit hours. Either semester. Prerequisite to all other courses in dairying. Mr. Erf, Mr. Stoltz, Mr. Jimison.

Lectures will be given on the relation of dairying to general agriculture; the composition of dairy products and the laws governing them; the secretion of milk and the testing of milk for butter fat; the formation of profitable herds; testing individual cows and herds for butter fat; entering and testing cows for Advanced Registries. In the laboratory, practical work will be given in the testing of milk and dairy products, and testing dairy herds for butter fat production.

ECONOMICS AND SOCIOLOGY

Office, 5 Page Hall

PROFESSORS HAGERTY, HAMMOND, LOCKHART, HUNTINGTON, RUGLES AND DE HAAS, ASSISTANT PROFESSORS WALRADT, PARRY AND NORTH, MR. DRURY, MISS MARK, MR. McKENZIE, MR. BICE, MR. GEPHART, MR. ECKELBERRY, MR. TAFT, MR. SHEPPARD, MR. THRASHER, MR. WEIDLER, MR. COON,
AND DEPARTMENT ASSISTANTS

ECONOMICS

General Economics: 101, 102.

Accounting: 139.

Banking and Finance: 141, 144, 147, 148.

Business Organization: 139, 159, 166.

Foreign Trade: 159, 160.

Geography: 132, 133, 159.

Industrial Organization: 139, 166; Sociology 101, 127.

Labor Problems and Administration: 119, 165, 166; Sociology 104, 105.

The following courses are open only to advanced undergraduates and graduates: 119, 141, 144, 159, 160, 165, 166, 203, 204, 207-216.

101-102. Principles of Economics. Three credit hours. The year. Not open to first year students. Should precede all courses in Economics except 132, 133, concurrent 139. Mr. Hammond, Mr. Lockhart, Mr. Ruggles, Mr. Parry, Mr. Drury, Mr. Bice, Mr. Gephart.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Text-book, lectures and individual investigation.

Economics 102 is given also during the first semester. Mr. Walradt.

Economics 101 is given also during the second semester. Mr. Walradt.

119. Women in Industry. Three credit hours. First semester. Prerequisite, Economics 101-102 or Sociology 101-102. Miss Mark.

A study of the economic position of women. Their relation to the household; their industrial and commercial opportunities; their preparation for various occupations. Legal, social and industrial problems created by the entrance of women into the field of industry.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102, or Economics 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effect upon the home. Organization of the household with reference to the functions of man and woman.

132. Principles of Social Geography. Three credit hours. First semester. Not open to juniors and seniors. Prerequisite to all courses in economic geography after 1918-1919. Mr. Huntington.

The geographic factors in environment, land, water, climate, plants and animals; their influence upon man, his distribution and his activities; and the uses which man makes of his geographic environment to gratify his manifold wants.

133. Economic Geography. Three credit hours. Second semester. Not open to juniors and seniors. Prerequisite to all advanced courses in economic geography after 1918-1919. Mr. Huntington.

The influences of geographic environment, with special reference to North America.

139. Elements of Accounting. Three credit hours. Either semester. Prerequisite, registration in Economics 101-102. Mr. Huntington and assistants.

An introduction to practical accounting, including the preparation and interpretation of business statements.

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 101-102. Mr. Lockhart.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141. Mr. Lockhart.

A critical examination of tax systems with particular reference to questions of incidents and of proposed reforms. The Ohio system of taxation will be given special consideration.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Huntington.

A study of the basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

This course is followed by Course 184.

160. International Commercial Policies. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Parry.

Theory of international trade; historic policies, mercantilism, free-trade and protection. A study of the tariff policy of the United States, with a comparative study of the policies of the British Empire, France and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Hammond.

A study of the labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. The Organization and Remuneration of Labor. Three credit hours. Second semester. Prerequisite, Economics 101-102. Mr. Hammond.

History of the labor movement. Trade union policies and methods. Employers' organizations. Collective bargaining. Industrial arbitration. Attempts to modify the wage system. Time, piece, and progressive wages. Profit sharing, labor co-partnership, and co-operation.

FOR GRADUATES

203-204. Distribution of Wealth.

207-208. Seminary in Economics.

209-210. Research in Corporations and Labor.

211-212. Research in Transportation and Public Utilities.

213-214. Research in Banking and Finance.

215-216. Research in Economic and Social Statistics.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SOCIOLOGY

General Sociology: 101, 102.

Population Problems: 107, 104, 105.

Philanthropy and Social Service: 127, 128, 131.

The following courses are open only to advanced undergraduates and graduates: 104, 105, 131, 201, 202, 207, 208.

101-102. Principles of Sociology. Three credit hours. The year. Mr. Hagerty, Mr. North, Miss Mark, Mr. McKenzie.

Not open to first year students.

A study of the fundamental principles of sociology. Text-book, lectures, collateral reading and individual investigation.

Sociology 101 is given also during the second semester.

Sociology 102 is given also during the first semester.

104. The Immigrant. Three credit hours. Second semester. Prerequisite, Sociology 101-102.

The causes and sources of migration, provisions for transportation, immigration laws, and the assimilation of nationalities.

105. The Negro. Three credit hours. First semester. Prerequisite, Sociology 101-102.

Tropical man and the results of his transference to a temperate clime. Negro health, crime, education and progress in the United States.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102. Mr. McKenzie.

A study of the matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman and Medieval periods. The modern family, its functions and its problems.

123. Anthropology. Three credit hours. First semester.

An elementary study of the essential characteristics of mankind and of the distinguishing traits of the several races of men; the origin and development of various races. Anthropological problems. Text-book, lectures, discussion and readings.

124. Ethnology. Three credit hours. Second semester. Prerequisite, Sociology 123.

A genetic study of the social, occupational, and mental life of the several races of men. The origin and development of the various institutions and activities which have had their beginning in primitive society. Ethnological problems. Text-book, lectures, discussion and readings.

127. **Leisure and Recreation.** Three credit hours. First semester. Prerequisite or concurrent, Sociology 101. Mr. North.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problem of modern communities from the standpoint of control and of public provision. Recreation surveys.

128. **Social Organization and Administration of Recreation Facilities.** Three credit hours. Second semester. Prerequisite, Sociology 127. Mr. North.

Methods and means of control of commercialized recreation with especial reference to American cities and towns. The promotion and organization of public and semi-public agencies. The administrative control of play-grounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

131. **The Criminal.** Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

The social, economic and physiological causes of crime. The changing character of crime as modified by the legal code. Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

FOR GRADUATES

201-202. **Advanced Sociology.**

207-208. **Seminary in Sociology.**

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSOR FRENCH, ASSISTANT PROFESSORS MEIKLEJOHN,
WILLIAMS, TURNBULL, AND SVENSEN, MR. EAGLE,
MR. FIELD, AND DEPARTMENT ASSISTANTS

101. **Elementary Mechanical Drawing.** Two credit hours. Either semester. Mr. French and department assistants.

Practice in the use of drawing instruments, elementary projections.

102. Mechanical Drawing. Three credit hours. Either semester. Prerequisites, Engineering Drawing 101 or 139. Mr. French and department assistants.

103. Descriptive Geometry. Three credit hours. First semester. Prerequisite, Engineering Drawing 102.

Two recitations and one two-hour drawing period each week.

104. Machine Sketching. Three credit hours. Second semester. Prerequisite, Engineering Drawing 103.

One lecture and two two-hour drawing periods each week.

139. Drawing for Manual Arts Teachers. Four credit hours. First semester. Manual Training, first year.

140. Drawing for Manual Arts Teachers. Three credit hours. Second semester. Prerequisite, Engineering Drawing 139. Manual Training, first year.

125. Mechanical Drawing. Two credit hours. Either semester.

131-132. The Teaching of Mechanical Drawing. Three credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT, GRAVES AND KETCHAM,
ASSISTANT PROFESSORS COOPER, BECK, ANDREWS AND
PERCIVAL, MR. CRAIG, MR. DISHONG, MR. WILEY,
MISS ROBINSON, MR. FOLEY, MISS DOLLINGER,
MR. EICH, MR. GYSAN, AND DEPARTMENT
ASSISTANTS

101. Paragraph Writing: Description and Narration. Two credit hours. Either semester. All instructors.

Text: Scott and Denney's Paragraph Writing, and Duncan, Beck and Graves's Specimens of Prose Composition.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session.

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisite, English 101, 104. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisite, English 101, 104, 105. Mr. Beck.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisite, English 101, 104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

108. Advanced Composition. Two credit hours. Second semester. Prerequisite, English 101, 104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Text-book: Greenough and Kittredge's Words and their Ways in English Speech.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves, Mr. Andrews.

Second semester: Mr. Cooper, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant and

Poe; of Hawthorne, Emerson, Whittier, Longfellow and Lowell; and of Walt Whitman; with a brief survey of recent literature.

145. Nineteenth Century Prose. Three credit hours. First semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Coleridge, Lamb, Landor, DeQuincy, Hazlitt and Carlyle.

146. Nineteenth Century Prose. Three credit hours. Second semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

141. Nineteenth Century Poetry. Three credit hours. First semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Wordsworth, Shelley, Keats, and their contemporaries.

142. Nineteenth Century Poetry. Three credit hours. Second semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris and Meredith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

137. Dr. Johnson and His Circle. Three credit hours. First semester. Prerequisite, six hours in English. Mr. Percival.

A study, through Boswell, of the life, character and opinions of Dr. Johnson and of his relation to the political, social and literary tendencies of his time. Reading in Boswell, Goldsmith, Sheridan, Garrick, Reynolds, Ossian, Mme. D'Arblay's Diary, Chesterfield's Letters, Walpole's Letters.

136. Eighteenth Century Poetry. Three credit hours. Second semester. Prerequisite, six hours in English. Mr. Percival.

After some consideration of the classical poetry of Pope and his contemporaries, the development of romantic poetry is studied in the works of Thomson, Gray, Collins, Burns, Goldsmith, Cowper, Blake, Crabbe and others.

157. **Versification.** Three credit hours. First semester. This course is limited to thirty members. Open only to juniors and seniors. Special permission necessary. The course should be preceded by a year-course in poetry. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

*159. **Milton and His Contemporaries.** Two credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Andrews.

The belles-lettres of the Puritan Revolution.

*160. **The Age of Dryden.** Two credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Andrews.

167. **Shakespeare: Histories and Tragedies.** Three credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Denney.

168. **Shakespeare: Comedies and Romances.** Three credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Denney.

*175-176. **American Literature.** Two credit hours. The year. Prerequisite, ten hours in English. Mr. Taylor.

Not open to those who have credit for English 133.

181. **The Teaching of English.** Two credit hours. First semester. Prerequisite, ten hours in English. Mr. Denney.

FOR GRADUATES

201. **History of the Short Narrative in English.**

202. **The Lyric.**

204. **The College Teaching of English.**

205. **History of Critical Theory.**

206. **Problems in the Drama.**

207. **The Later Novel.**

208. **The Later Poetry.**

209. **English and Scottish Popular Ballads.**

210. **English Usage.**

*212. **The Celtic Renaissance.**

*Not given in 1918-1919.

213. The Technique of the Modern Drama.

214. The Technique of the Drama.

215-216. Studies in Seventeenth Century Literature.

217-218. Studies in Eighteenth Century Literature.

219-220. Discussion of Dissertations.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING

101. Public Speaking. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Eich.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

102. Debating. Two credit hours. Second semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Eich.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

107-108. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, consent of the instructor. Mr. Ketcham.

A study of great political and legal debates. Special applications of logic to argument. Practice in drawing briefs and presenting oral arguments on political and legal problems.

110. Advanced Debate Practice. Two credit hours. Second semester. Two practice periods each week. Elective. Prerequisite, consent of the instructor. Mr. Ketcham.

An advanced course for students showing special ability in debate.

114. Extempore Speaking. Two credit hours. Second semester. Prerequisite, Public Speaking 102. Mr. Eich.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

***121-122. Masters of Public Address.** Two credit hours. The year. May be taken with Public Speaking 101 and 102, but may not precede them. Given biennially. Mr. Ketcham.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment, and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry, Webster, Clay, Calhoun, Lincoln, Beecher and Phillips. Lectures, readings and reports.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisite, Public Speaking 101-102. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominating speeches; after dinner speaking; discussions of current events; political, business and social addresses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

151-152. Special Problems in the Theory of Public Speaking. Two credit hours. The year. Prerequisite, Public Speaking 101-102 and four additional credit hours in public speaking. Given biennially. Mr. Ketcham.

The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals and aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

EUROPEAN HISTORY

Office, 204 University Hall

PROFESSORS SIEBERT, McNEAL, AND PERKINS, ASSISTANT
PROFESSOR HARRIS, MR. KNIPFING

101. Medieval History. Three credit hours. First semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

102. Modern History from 1500 A. D. Three credit hours. Second semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris.

*Not given in 1918-1919.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third and fourth year students. Mr. Perkins, Mr. Harris.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

105. History of Greece. Three credit hours. First semester. No prerequisite for second, third and fourth year students. Mr. McNeal.

106. History of Rome. Three credit hours. Second semester. No prerequisite for second, third and fourth year students. Mr. McNeal.

***119-120. History of Germany.** Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

121-122. History of France. Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107-108. Medieval Civilization. Two credit hours. The year. Prerequisite, European History 101, 102. Mr. McNeal.

Advanced students from other departments admitted without this prerequisite on consent of instructor.

First semester, the culture produced by feudal society; second semester, the culture produced by the church.

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisite, European History 101, 102. Mr. Siebert.

*Not given in 1918-1919.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisite, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

123-124. Europe from 1815 to 1918. Three credit hours. The year. Prerequisite, European History 101, 102. Mr. Perkins.

The history of central and western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. History of the Church in Western Europe. Two credit hours. The year. Prerequisite, European History 101, 102. Advanced students from other departments admitted without the prerequisite. Mr. Harris.

129-130. Historical Literature and Method. Two credit hours. The year. Two lectures each week. Elective. Prerequisite, European History 101-102, and at least one other year course in the department. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris, Mr. Knipfing.

An introduction to the chief sources for the various divisions and periods of European history, and a characterization of the principal secondary authorities. Exercises in historical bibliography and method. Designed for students specializing in European history.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert, Mr. Perkins.

This course will most naturally be taken as a continuation of American History 121 (Teachers' Course), the two semesters forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History

101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

FOR GRADUATES

203-204. Seminary in Modern European History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FARM CROPS

Office, 101 Horticulture Building

PROFESSOR PARK, ASSISTANT PROFESSOR WILLARD, PROFESSOR WILLIAMS (Non-Resident), AND DEPARTMENT ASSISTANTS

101. Field Crop Production. Four credit hours. Either semester. Prerequisite, Botany 101 or its equivalent, prerequisite or concurrent, Soils 152. Mr. Wiggans.

A study of the history, adaptation, distribution, and classification of the cereal crops, and the cultivation, harvesting, and marketing of the same throughout the great agricultural sections of the world, with especial attention given to Ohio conditions.

FRENCH

(See Romance Languages)

GEOLOGY

Office, 104 Orton Hall

PROFESSORS BOWNOCKER AND CARMAN, ASSISTANT PROFESSORS HILLS AND TUCKER, MR. VERWIEBE, MR. COTTINGHAM, MISS MORNINGSTAR

101-102. Physiography. Three credit hours. The year. Open to freshmen and sophomores only. Mr. Bownocker, Mr. Hills, Mr. Cottingham.

Three field trips are made Saturdays in each semester, each trip taking the place of a recitation. During three months the Monday recitation is replaced by laboratory work.

Physiographic features of the earth's surface; the ocean, and the atmosphere. Recitations, lectures and assigned readings, illustrated with models and lantern views.

103. Inorganic Geology. Three credit hours. First semester. Mr. Bownocker.

Introductory course. Petrographical, structural and dynamical geology. Study of common minerals and rocks and geological maps. The course is illustrated with lantern views, models, and museum materials.

104. Historical Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103. Mr. Carman.

A general course in paleontological and stratigraphical geology, illustrated by lantern views, maps and specimens. The development of organisms and the classification and distribution of geological formations, especially those of Ohio, are considered. After the first of April, some of the Friday lectures will be replaced by field trips on Saturdays.

Geology 101 or 103, and 104 are considered prerequisites for advanced work in physiography, historical or inorganic geology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Field Geology. Three to five credit hours. First semester. Prerequisite, Geology 101 or 103-104. Mr. Carman.

Lectures, assigned readings, field trips and laboratory work. Field trips generally on Saturdays while the weather permits, laboratory work for the remainder of the semester.

A study of the geological formations readily accessible from Columbus, and the identification of fossils characteristic of different formations. This course is intended to acquaint the student with the ordinary methods of field investigation, and involves the collection and identification of specimens, the measurement of geological sections, and the preparation of a report describing the region studied. Occasionally, longer geological excursions will be arranged.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103 and 104. Mr. Hills.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned

readings and map work. The second half, largely to field work and the preparation of reports, the field work being on Saturdays.

111. Physiography of Central Ohio. Three credit hours. First semester. Prerequisite, Geology 101-102, and 103-104, or 103-104 concurrent. Mr. Hills.

Three field trips each week while the weather permits; assigned reading and written reports during the winter.

Field and laboratory course.

116. Physiographic Geology. Three credit hours. First semester. Prerequisite, Geology 101-102 and 103-104. Mr. Hills.

Intensive study of physiographic principles, processes and agents, with an application to certain type regions of the United States. Occasional field trips.

175-176. The Teaching of Physiography. Two credit hours. The year. Prerequisite, Geology 101-102, 104, 106, and 111, or an equivalent. Mr. Hills.

Lectures, readings, conferences, and reports. Sources and selection of materials; use of maps, globes and other representative materials; the excursion; preparation of type studies; correlation of topics; and discussion of the general course, with other topics of practical importance to the teacher of physical geography.

FOR GRADUATES

201-202. Advanced Historical Geology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317-318 University Hall

PROFESSORS M. B. EVANS AND EISENLOHR, ASSISTANT PROFESSORS THOMAS, BARROWS, LEWISOHN, AND BUSEY, MR. KOTZ, AND DEPARTMENT ASSISTANTS

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic and practice courses. The linguistic and practice courses are intended primarily for students who desire to make

direct professional use of the language. A student beginning German at the University is advised not to take the subject as a major study. For students who enter with two years of German and who desire to major in German the following outline course is recommended:

First year: 103-104.

Second year: 115-116 and 131-132 or 133-134.

Third year: 117-118 or 119-120, 175, and one literary course in the group Advanced Undergraduates and Graduates.

Fourth year: at least one literary course in the group Advanced Undergraduates and Graduates, 171-172, 173, 177-178.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 102 is given also during the first semester.

German 101 is given also during the second semester.

103. Intermediate German. Four credit hours. First semester. Prerequisite, German 101-102 or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose and a classical drama supplemented by discussions of syntax; prose composition.

German 103 is given also during the second semester.

104. Easy Classical Reading and Composition. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

German 104 is given also during the first semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, and sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year. Open only to freshmen with four entrance units in German. Mr. Busey, Mr. Kotz.

Modern and classical prose and verse. Oral and written practice.

***115-116. Classical and Modern Writers.** Three credit hours. The year. Mr. Kotz.

Selections from the 18th and 19th century writers; written and oral exercises. To be conducted in German.

117-118. Schiller: Introduction to Life and Works. Two credit hours. The year. Miss Thomas.

First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Kreig.

119-120. Nineteenth Century Drama. Two credit hours. The year. Miss Barrows.

Selected dramas read and interpreted in class. The interpretation will take the form of simple lectures in German to be reproduced orally and in writing by the student. First semester: Selections from Kleist, Grillparzer, Hebbel, Ludwig. Second semester: Selections from Wildenbruch, Sudermann, Hauptmann, Fulda. To be conducted in German.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor. Miss Barrows, Mr. Busey.

***133-134. Conversation.** Two credit hours. The year. The class will meet four times a week. Little outside preparation required.

German 115 to 134, not open to freshmen, require as prerequisite German 104 or its equivalent. German 115-116, offering a considerable amount of intensive oral and written work, is especially recommended for students desiring to take German as a major subject. German 117 to 124 are primarily reading courses. No student may elect more than two year-courses in the group 107 to 124. A combination of German 131-132 or 133-134 with one of the Courses 115 to 124 is advised.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: At least one year course in the group 107 to 124 or the equivalent.

*Not given in 1918-1919.

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

***151-152. Goethe: Introduction to Life and Works.** Three credit hours. The year. Mr. Evans.

First semester: Selections from lyrics, early dramas and prose. Second semester: Faust.

153-154. Survey of German Literature. Three credit hours. The year. Mr. Evans.

Lectures, interpretation of selected texts and parallel readings. First semester: From the beginning to Lessing. Second semester: Classical period and nineteenth century.

***155-156. Lessing: Introduction to Life and Works.** Two credit hours. The year. Mr. Eisenlohr.

First semester: Dramas. Second semester: Critical writings, to be conducted in German.

157. Volkslied. Two credit hours. First semester. Mr. Eisenlohr.

Studies in the origin and growth of the German folksong with special reference to German life and culture. To be conducted in German.

***158. Volksbuecher, Maerchen, und Sagen.** Two credit hours. Second semester. Mr. Eisenlohr.

Studies in popular and legendary literature. To be conducted in German.

***159. Heine: Introduction to Life and Works.** Two credit hours. First semester.

***160. Hebbel: Introduction to Life and Works.** Two credit hours. Second semester.

***161-162. Romantic Writers.** Two credit hours. The year. Miss Thomas.

Lectures on the Romantic Movement with the reading of representative texts. First semester: Selections from Novalis, Tieck, Arnim. Second semester: Selections from Eichendorff, Uhland, Hoffman.

*Not given in 1918-1919.

***163. Nineteenth Century Lyric.** Two credit hours. First semester.

164. Nineteenth Century Lyric. Two credit hours. Second semester. Mr. Eisenlohr.

The form and content of German lyric poetry will be studied through intensive analysis of lyrics selected from the works of Goethe, Heine, and the Romanticists, Lenau, Moericke, Geibel, Meyer, Storm, and Liliencron.

171-172. Advanced Prose Composition. Two credit hours. The year. Open only on consent of instructor. Mr. Eisenlohr.

173. The Teaching of German. Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports and practice teaching. Open only to seniors and graduate students.

174. Grammar Review. Two credit hours. Second semester. Mr. Evans.

A detailed discussion of theoretical grammar from the standpoint of the high school teacher. Open only to seniors and graduate students.

***175. Phonetics.** Two credit hours. First semester. No prerequisites. Not open to first and second year students. Miss Barrows.

Speech sounds with special reference to German, French and English.

***176. Interpretative Reading.** Two credit hours. Second semester. Miss Barrows.

Practice in reading German; narrative and dramatic prose and verse. Not open to graduate students for credit.

177. Middle High German. Two credit hours. First semester. Mr. Busey.

Introductory course. Grammar and selected readings.

178. History of the German Language. Two credit hours. Second semester. Mr. Busey.

*Not given in 1918-1919.

Lectures and illustrative readings, with special reference to the needs of those intending to teach.

181-182. Minor Investigation. Two credit hours. The year. Prerequisite, at least two year courses in the group for advanced undergraduates and graduates. Mr. Evans, Mr. Eisenlohr, Miss Thomas, Miss Barrows, Mr. Busey.

Investigation of minor problems in the various fields of German literature and philology.

FOR GRADUATES

***201-202. Advanced Middle High German.**

203. Gothic.

204. Old High German.

***207-208. The Literature of the Empire (1870-1895.)**

***209-210. Franz Grillparzer.**

***212. Methodology.**

***214. Experimental Phonetics.**

215-216. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities.

123-124. Life and Literature of the Greeks. Two credit hours. The year. No prerequisite. Lectures on private life; on epic, lyric and dramatic poetry; on the historians, the philosophers and orators.

***127-128. Proseminary in Greek.** Two credit hours. The year. Elective. Prerequisites, one year of elementary Greek,

*Not given in 1918-1919.

and the equivalent of at least four semester courses of college Greek. Mr. Bolling.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Thucydides and Demosthenes. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

Thucydides: Book I or Book VII. Demosthenes: Olynthiacs.

110. Demosthenes and Theocritus. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

Demosthenes: Philippics. Theocritus: Selections.

111. Attic Drama. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

Euripides: Alcestis. Sophocles: Oedipus Tyrannus, with lectures on scenic antiquities.

112. Attic Drama. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

Continuation of Greek 111, two plays.

113. Epic Poetry and Aristophanes. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

Epic Poetry: Selections. Aristophanes: The Birds.

114. Aristophanes and Post-Classical Greek. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

Aristophanes: The Clouds. Post-Classical Greek: Lucian.

119. Readings in Greek Philosophy. Two credit hours. First semester. Prerequisite, Greek 108. Mr. Bolling.

120. Studies in New Testament Greek. Two credit hours. Second semester. Prerequisite, Greek 108. Mr. Bolling.

121-122. Historical Greek Grammar. Two to four credit hours, according to the needs of applicants. The year. Mr. Bolling.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not pre-suppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

Courses 115-116, 121-122, 123-124, are planned to meet the needs of students who have no knowledge of Greek.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 202 Botany and Zoology Building

PROFESSOR ANDERSON

101-102. History of Education. Three credit hours. The year. Prerequisite, one year's work in European history, philosophy or psychology. Mr. Anderson.

Text: Graves's A History of Education (three volumes).

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102 and Philosophy 151-152. Mr. Anderson.

105-106. Educational Classics. Two credit hours. The year. Prerequisite, History of Education 101-102 and Psychology 101-102. Mr. Anderson.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel and Spencer. Reports and conferences.

107-108. Comparative Education. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England and the United States.

109-110. History of Education in the United States. Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

112. History of Industrial Education. Two credit hours. Second semester. Prerequisite, History of Education 101-102 or equivalent. Open to seniors and graduates only. Mr. Anderson.

FOR GRADUATES

201-202. Seminary in the History of Education.

203-204. Seminary in Educational Philosophy.

206. A Special Survey of Source Materials and of General Literature in the Field of the History of Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 120 Home Economics Building

PROFESSORS WHITE AND VAN METER, ASSISTANT PROFESSOR HATHAWAY, MISS TUCKER, MRS. WALKER, MISS SKINNER, MISS LINDER, MRS. ADAMS, MISS FREEMAN, MISS HESSE, AND DEPARTMENT ASSISTANTS

101-102. Foods. Five credit hours. The year. Two lectures, one quiz and two laboratory periods each week. Prerequisite, Chemistry 106 or 110. Miss White, Miss Skinner, Miss McGuire.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost and value of the nutrients in the various food materials.

104. Sanitation. Three credit hours. Either semester. Three lectures each week. Prerequisite or concurrent, Bacteriology 107. Miss Linder.

Location and construction of the house, water supply, plumbing, heating, ventilating and lighting. Interdependence of home and public agencies in securing sanitation and hygiene. Special attention is given to emergencies, first aid to the injured, and home nursing.

111-112. Textiles. Two credit hours. The year. One lecture and one laboratory period each week. Prerequisite or concurrent, Art 119. Mrs. Walker, Miss Tucker, Miss Miller.

The study of fibres and fabrics from a historic, economic and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs, and a comparison with commercially prepared articles.

Students having had previous work should consult with the instructor.

113. Dress. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Home Economics 111-112 and Art 121 prerequisite or concurrent. Miss Hathaway, Miss Miller.

The careful selection and combination of materials, the drafting of patterns, and the designing and making of a simple dress.

116. **Dress.** Three credit hours. Second semester. One lecture and two laboratory periods each week. Miss Hathaway, Miss Miller.

Continuation and amplification of Home Economics 113.

Outline of history of costume and continuation of the study of selection and combination of materials in their application to dress.

The lecture may be taken as a one-hour course without the laboratory.

118. **The House.** Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisites, Art 131, Home Economics 112. Home Economics 104, Economics 101, Art 141, either prerequisite or concurrent. Miss Tucker.

A study of the evolution of the house and the principles underlying house arrangement, furnishing and decoration.

119. **The House.** Three credit hours. Either semester. Three lectures each week. Continuation of 118. Prerequisites, Economics 102, Art 141, Home Economics 102, 118, 104 or 110. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

121. **Food Problems.** Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisites, Chemistry 106 or 110, Home Economics 101-102 and consent of the instructor. Miss Linder, Miss Skinner.

Problems of markets, fuels, equipment and labor involved in selection, purchase, preparation and service of food.

108. **Teaching of Home Economics.** Two credit hours. Second semester. Two lectures each week. Prerequisites, Home Economics 101-102, 111-112, Psychology 101. Miss Van Meter, Miss Hathaway, Mrs. Adams.

This course is designed for students intending to teach home economics. Survey of home economics, examination of courses of study, lesson plans and study of various types of schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. **Proseminary.** Two to five credit hours. First semester. One lecture each week. Prerequisite, eighteen hours of required home economics work. Miss Van Meter.

Readings and reports on home economics topics. Problems assigned for individual research.

106. **Proseminary.** Two to five credit hours. Second semester. One lecture each week. Continuation of Home Economics 105. Prerequisite, Home Economics 105 and consent of the instructor. Miss Van Meter.

Special research continued. Reports and conferences.

110. **Dietetics.** Four credit hours. Either semester. Two lectures and two laboratory periods each week. Prerequisites, Home Economics 101-102, Physiology 101-102, Agricultural Chemistry 123-124. Miss Skinner.

A study of the chemical, physiological and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Translation of standard dietaries into food materials and some exercise in making dietary studies and in preparing food for the sick.

FOR GRADUATES

201-202. **Research Course.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

HORTICULTURE AND FORESTRY

Office, 118 Horticulture Building

PROFESSOR PADDOCK, ASSISTANT PROFESSORS SCHERER, ELWOOD
AND ALLEN, PROFESSOR TAYLOR (Non-Resident)

HORTICULTURE

101. **Principles of Horticulture.** Four credit hours. First semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if the student has already passed Horticulture 118.

A study of plant growth with special reference to orchard, garden, greenhouse and nursery practice. The methods of plant propagation are studied in detail.

120. Small Fruits and Grapes. Four credit hours. Second semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if Horticulture 118 has been passed. Prerequisite, Horticulture 101.

History, botany, geography, site and soil for plantation, planting, cultural practices, harvesting, marketing and cost of accounting.

156. Landscape Architecture. Two credit hours. Second semester. Mr. Elwood, Mr. Allen.

A general study of the underlying principles of landscape architecture. This course is open to the general student-body and is supplemented by discussions from outside lecturers, who have made a special study of different phases of this profession. The practical application of the principles of landscape architecture will be covered as they relate to the development of public and private properties including farms, country estates, gardens and parks.

FORESTRY

184. Principles of Forestry. Three credit hours. Second semester. Three lectures with occasional recitations. Elective. Mr. Scherer.

This course is intended as a bird's-eye view of the objects and purposes of forestry; the problems it has to solve; the conditions necessary for its success; the materials with which it has to work and the technical terms peculiar to it,—all serving to introduce the student to a broad glimpse of the profession. It is planned to acquaint the student with the conditions necessary for tree growth; the factors influencing the distribution of forests; different types of forests; distribution of forests over the world; the exploitation and yield in different forest products and their relative importance.

Adapted to students of other departments.

INDUSTRIAL ARTS

(See Shopwork)

ITALIAN

(See Romance Languages)

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS DERBY, HODGMAN, AND ELDEN

147. **Elementary Latin.** Four credit hours. First semester. Grammar and exercises. This course is offered to students who have not studied Latin.

148. **Elementary Latin.** Four credit hours. Second semester. Prerequisite, Latin 147.

Caesar, four books and exercises.

149. **Cicero, Orations.** Four credit hours. First semester. Prerequisite, Latin 147-148 or their equivalent.

150. **Vergil, Aeneid.** Four credit hours. Second semester. Prerequisite, Latin 147-149 or their equivalent.

101. **Cicero, Livy, Horace, Aulus Gellius.** Four credit hours. First semester. Prerequisite, four units of preparatory Latin. Mr. Hodgman, Mr. Elden.

Cicero: *De Senectute* and *De Amicitia*; Livy; Horace: *Odes*; Aulus Gellius: *Selections*.

102. **Horace, Ovid, Livy, Sallust.** Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden.

Horace: *Odes*; or Ovid; *Metamorphoses*; Livy or Sallust, or *Prose Composition*.

103. **Pliny or Cicero; Catullus or Tacitus.** Three credit hours. First semester. Prerequisite, Latin 101-102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: *Selected letters*. Catullus or Tacitus.

104. **Latin Comedy.** Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. **Roman Satire.** Two credit hours. First semester. Prerequisite, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

106. Roman Philosophy and Rhetoric. Two credit hours. Second semester. Prerequisite, Latin 101 to 104. Mr. Elden. Cicero and Quintilian.

107-108. Roman Private Life. One credit hour. The year. Prerequisites, Latin 101, 102. Mr. Derby.

111-112. Roman and Comparative Literature. One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany and England.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Roman Art and Archaeology. One or two credit hours. The year. Mr. Derby.

The course is open to undergraduates excepting freshmen, and to graduates.

The development of the arts and crafts in early Italy, and especially of Roman architecture, sculpture, wall decoration, mosaic, gems and pottery. It is open not only to students of Latin, but also to other students who are interested in the subject.

113-114. Proseminary. Three credit hours. The year. Prerequisite, Latin 101-104. Mr. Elden.

115-116. Latin Prose Composition. Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. Advanced Latin Composition. One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman.

Translation of English narrative and study of Latin idiom.

121. Roman Prose Authors. Two credit hours. First semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Sounds and inflections. Pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Elden.

Syntax. Lectures on the problems connected with the origin and development of certain constructions in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes, and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned readings on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of textbooks; preparation of lessons; conduct of recitations; equipment, bibliography of books of reference, periodicals, etc.; illustrative

exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

130. Readings from Latin Authors on Education; and Practice in Reading at Sight. Two credit hours. Second semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Selections from Cicero, Quintilian, and other authors touching on education; together with instruction and practice in reading at sight.

131-132. Roman Public Life. One or two credit hours. The year. Prerequisite, Latin 103-104 or European History 106. Mr. Dunlap.

A brief survey of the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

FOR GRADUATES

201-202. Roman Religion.

203-204. Medieval Latin.

***207-208. Seminary.**

213-214. Elements of Epigraphy and Palaeography.

***215-216. Roman Antiquities and Archaeology.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

MANUAL TRAINING

Office, 212 Shop Building

PROFESSOR USRY, MR. SMITH

111. Teaching of Manual Training. Three credit hours. First semester. Manual Training, fourth year.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up its strength. Point of view in industrial and vocational education; the part-time, co-operative, and trade school; night and continuation schools.

*Not given in 1918-1919.

112. Materials, Methods, and Equipment. Three credit hours. Second semester. Manual Training, fourth year.

Organization, equipment and its care; supplies, courses of study, methods of presentation of subject, general procedure.

117-118. Constructive Design. Two credit hours. The year. Manual Training, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of material to project. These problems will cover work in the upper elementary grades and the secondary school.

121-122. Handwork for Supervisors. Two credit hours. The year. These courses should not be taken before the third year. Art 119, 131, 141, prerequisite or concurrent.

For elementary school supervisors of drawing, home economics, and manual training, suggesting means of correlating these subjects with the elementary school subjects.

Work in basketry, weaving, elementary woodwork, clay and various other mediums of expression is made use of in suggesting the correlation.

Assigned readings and discussions along with the construction work.

125. Elementary Woodwork. Two credit hours. Second semester. Manual Training, first year. Mr. Usry, Mr. Smith. Formerly Shopwork 133.

127-128. Wood Turning and Pattern Making. Three credit hours. The year. Prerequisite, Manual Training 125. Manual Training, second year. Mr. Usry, Mr. Smith.

Formerly Shopwork 129-130.

129. Cabinet Making. Two credit hours. Either semester. Prerequisite, Manual Training 125. Manual Training, third year. Mr. Usry, Mr. Smith.

Formerly Shopwork 113.

131. Advanced Cabinet Work. Three credit hours. First semester. Prerequisite, Manual Training 129. Optional, Manual Training, fourth year. Mr. Usry, Mr. Smith.

Formerly Shopwork 131.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. **Special Problems in Manual Training.** Two credit hours. Either semester. For superintendents and principals. Mr. Usry.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, costs, selection of teachers, salaries, and ways to help the teacher in service. Open to seniors or graduates, or to men of experience acceptable to the instructor.

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOARD, SWARTZEL, KUHN, RASOR, AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT PROFESSORS PRESTON, BAREIS, WEST, MISS RICKARD, MR. WEAVER

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German and Italian by the beginning of the junior year, and to take some courses in philosophy, particularly logic, in the junior and senior years.

121. **College Algebra and Trigonometry.** Three credit hours. First semester. Mr. Swartzel, Mr. Arnold, Mr. West.

122. **Plane Trigonometry and Analytical Geometry.** Three credit hours. Second semester. Mr. Swartzel, Mr. Arnold, Mr. West.

125-126. **History of Elementary Mathematics.** Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. **Analytical Geometry and Calculus.** Three credit hours. The year. Prerequisites, Mathematics 122 or 132. Mr. Kuhn.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisite, entrance algebra and geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122, or 132. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: Differential and Integral Calculus.

*163-164. Plane and Solid Analytical Geometry. Three credit hours. The year. Miss Bareis.

165-166. Advanced Calculus. Three credit hours. The year. Mr. Morris.

167-168. Differential Equations. Three credit hours. The year. Mr. Bohannon.

171-172. Projective Geometry. Three credit hours. The year. Miss Bareis.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

*Not given in 1918-1919.

186. **The Teaching of Mathematics.** Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions and practice teaching.

FOR GRADUATES

201-202. **Theory of Functions of a Complex Variable.**

203. **Fourier's Series and Spherical Harmonics.**

204. **Vector Analysis and its Applications.**

205-206. **Calculus of Variations.**

207. **History of Mathematics.**

209-210. **Theory of Statistics.**

211-212. **Groups.**

213-214. **Differential Geometry.**

215-216. **Functions of a Real Variable.**

217-218. **Infinite Series and Products.**

219-220. **Theory of Numbers.**

221-222. **Theory of Invariants.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

MILITARY SCIENCE AND TACTICS

Office, 104 Hayes Hall

MAJOR CONVERSE, U. S. A., CAPTAIN SMALL, U. S. A., SERGEANTS
MADDEN AND O'ROURKE, MR. BRUDER

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees, therefore, requires all male students, both special and regular, unless excused by the Military and Gymnasium Board, to drill during two years. This work is under two commissioned officers of the regular army, detailed for the purpose. The Military Department is open during five days each week throughout the year.

1. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring) military drill; four months, three hours each week (winter) of classroom instruction in drill regulations. Target practice at any open hour during the afternoon of the winter months, at 100,

200, and 300 yards. Lecture, one hour each week by the President, upon topics of common interest to the student body.

2. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring), in extended order and guard duty. Four months, three hours each week (winter) of class-room instruction in articles of war, guard manual, and field service regulations. Target practice, at any open hour of the afternoon of the winter months, at 500, 600, and 800 yards.

PHILOSOPHY

Office, 321 University Hall

PROFESSORS LEIGHTON AND DAVIES, ASSISTANT PROFESSORS
CHANDLER AND AVEY, MR. WILLIAMS

101. **Introduction to Philosophy.** Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Davies, Mr. Chandler.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state and religion.

102. **Introductory Logic.** Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Davies, Mr. Chandler.

A practice course in the methods of correct thinking.

105. **Elementary Ethics.** Three credit hours. First semester. Not open to first year students. Mr. Williams.

An introductory study of the chief theories of the moral life.

106. **Elementary Ethics: History of Moral Ideas and Practices.** Three credit hours. Second semester. Not open to first year students. Mr. Williams.

A historical study of the chief stages in moral evolution—tribal morality, the moral ideas of the ancient Hebrews and Greeks, medieval society, and modern industrialism.

115-116. **Esthetics.** Two credit hours. The year. Not open to first year students. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering

their relation to human nature, their respective limitations, and their value for individual and social life.

107. History of Ancient and Medieval Philosophy. Three credit hours. First semester. Not open to first year students. Mr. Davies, Mr. Chandler.

The development of Greek philosophy; early Christian philosophy, the medieval schools.

108. History of Modern Philosophy. Three credit hours. Second semester. Not open to first year students. Mr. Leighton, Mr. Davies.

The development of modern philosophic thought from Francis Bacon and Descartes to Charles Darwin and Herbert Spencer.

144. Introduction to Metaphysics. Two credit hours. Second semester. Prerequisite, either Philosophy 101, 102, 105, 107 or 108. Mr. Leighton.

A discussion of the chief modern theories of the nature of reality.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***119. Philosophy of Religion.** Three credit hours. First semester. Prerequisite, one year's work in philosophy, psychology or history of religion. Mr. Leighton.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

121-122. Metaphysics. Three credit hours. The year. Prerequisites, at least one year's work in philosophy and in psychology or a natural science. Mr. Leighton.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality and theism.

***123-124. Representative Ancient Philosophers.** Three credit hours. The year. Prerequisite, one year in philosophy and one year in a related subject. Mr. Chandler.

*Not given in 1918-1919.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

***125-126. Representative Modern Philosophers.** Three credit hours. The year. Prerequisite, one year in philosophy and one year in a related subject. Mr. Chandler.

Selected works of Leibniz, Hume, Kant and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

134. Political and Social Philosophy. Three credit hours. Second semester. Prerequisite, one year in philosophy or psychology, and one year in sociology, political science or history. Mr. Leighton.

The ethical values and aims involved in social institutions and their evolution, with especial reference to the state, the family, economic activities, and education; an examination of the ethical and metaphysical problems involved in the relation of the individual to society, and the philosophy of history.

***142. The Main Currents in Contemporary Philosophy.** Two credit hours. Second semester. Prerequisites, Philosophy 101, 105-106, 107 or 108. Mr. Leighton.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science and social movements.

146. Philosophy of History. Three credit hours. First semester. Prerequisite, any two of Philosophy 101, 105, 106, 111, 134, 107, 108, and one year's work in European History. Mr. Leighton.

A critical examination of the principal theological and philosophical theories of the meaning of history and human progress in the light of ethics and the philosophy of values, with a view to arriving at correct conceptions of the meaning of history and the fact and nature of progress, especially ethical and intellectual progress. The theories dealt with will be chiefly those of the Church fathers, of the German philosophers from Lessing to Nietzsche, Dilthey, Windelband, Rickert, Simmel and Eucken; and of Comte, Spencer, Buckle, Carlyle, and contem-

*Not given in 1918-1919.

porary English and American thinkers. Intended for students of literature, history, politics and sociology.

150. Pragmatism. Two credit hours. Second semester. Prerequisite, either Philosophy 101, 107 or 108. Mr. Williams.

An account and critical estimate of the movement known as pragmatism and its later form, instrumentalism, with special reference to the work of William James; F. C. S. Schiller, and John Dewey.

FOR GRADUATES

201-202. Seminary in Philosophy.

207-208. Contemporary Philosophical Issues.

209-210. Discussion of Current Philosophical Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION

MEN

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE, CASTLEMAN, AND NICHOLS, MR. OHLSON, MR. TRAUTMAN, MR. BIRD

Students in the College of Education may take courses in physical education as a minor—twelve semester hours, in addition to the required courses 101-102 (men) or 131-132, 133-134 (women)—on the approval, in each case, of the Head of the Department of Physical Education and the Dean of the College.

Juniors and seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than six semester hours. In each case the approval of the Head of the Department and the Dean of the College of Education is necessary.

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of all first year students in this college. During the first semester the course consists of one lecture on personal hygiene and one period of active physical exercise each week.

Personal Hygiene: Lectures and quizzes on the cause, prevention, and hygienic treatments of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of the student.

Physical Exercise in Class: A graded course of free-hand exercises, with light hand apparatus for the relief and correc-

tion of slight bodily defects, improper carriage; graded progressive exercises to promote muscular tone, organic vigor, bodily skill; class dancing, gymnastic and athletic games and contests.

107. Organization and Administration of Physical Education in Secondary Schools. Two credit hours. First semester. Elective. Mr. St. John, Mr. Wilce, Mr. Castleman.

Consideration of problems of organization for general intramural physical activity. Organization, administration, and control of competitive athletics.

110. Theory of Physical Education. Two credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

112. Principles of Coaching. Two credit hours. Second semester. Prerequisite, Physical Education 110. Mr. St. John, Mr. Wilce, Mr. Castleman.

Instruction in the organization, conduct and coaching theory and practice of competitive athletic games, football, basketball, baseball and track.

120. Anthropometry and Physical Diagnosis. Two credit hours. Second semester. Elective. Prerequisite, Physiology 101-102. Mr. Castleman, Mr. Nichols.

Theory of taking and keeping records of physical history of students. Anthropometric measurements. Preliminary examination of eye, ear, nose, throat, lungs, heart, back, feet, with interpretation of knowledge obtained.

122. Teaching of Physical Education. Two credit hours. Second semester. Elective. Prerequisites, Physiology 101-102, Psychology 101-102, and previous satisfactory physical training. Mr. Nichols.

One hour theory of teaching and two hours practice of gymnastics, calisthenics, and general floor work and handling of squads.

125. Hygiene and First Aid. Two credit hours. First semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

A study of the basic principles of health and their application in personal hygiene with particular reference to physical education. Principles and methods of first aid, emphasizing conditions arising in connection with physical education.

The above courses are open to third and fourth year students on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

WOMEN

ASSISTANT PROFESSOR MEYER, MISS HAMMETT, MISS MESLOH

131-132. Physical Education. One credit hour. The year. Four hours each week. Required of all women students during the first year of attendance at the University.

Lectures on personal hygiene.

Gymnasium exercises, elementary Swedish gymnastics, calisthenics, drills with wands, Indian clubs, etc. Folk dances, technique of aesthetic dancing, and gymnastic games.

133-134. Physical Education. One credit hour. The year. Four hours each week for second year students; required of all women students.

Lectures on principles of physical education.

Gymnasium exercises, a continuation of Physical Education 131-132.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Two lectures, three hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Two lectures and three hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

NOTE: The above courses are open only to juniors and seniors on approval of the department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing courses 135 and 136 should have had courses in anatomy, physiology, psychology and history of education.

Physical Education 125 for men is also open to women who desire to minor in Physical Education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARHART, BLAKE, BARNETT, SHEARD, AND
ALPHEUS W. SMITH, ASSISTANT PROFESSOR HEIL, MR.
WOODBURY, MR. ALVA W. SMITH, MR. DITTO,
AND DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures and laboratory. A non-mathematical course for students who have no entrance credit in physics. Mr. Earhart.

105-106. General Physics. Four credit hours. The year. Prerequisite, entrance credit in physics. Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Smith.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Smith.

This course alternates with Physics 143-144.

***143-144. Advanced Light and Electricity.** Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106, Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism, Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. Proseminary in Physics. One credit hour. The year. Prerequisite, two years of college work in physics or one year in physics and one in mathematics or chemistry. Mr. Cole.

*Not given in 1918-1919.

147. Molecular Physics and Heat. Three credit hours. First semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128.

148. Conduction of Electricity Through Gases and Radioactivity. Three credit hours. Second semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128. This course alternates with Physics 143-144.

169-170. Theory of Light. Two credit hours. The year. Prerequisite, Physics 105-106 and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

FOR GRADUATES

201-202. Research Laboratory.

***203-204. Theoretical Mechanics.**

***205-206. Thermodynamics and Electrolytic Conduction.**

207-208. Theory of Electricity and Magnetism.

***211-212. Theory of Oscillations with Applications to Wireless Telegraphy.**

***213-214. Conduction of Electricity Through Gases and Radioactivity.**

215-216. Electromagnetic Theory.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

Office, 104 Biological Hall

PROFESSORS BROOKS AND BLEILE, ASSISTANT PROFESSORS SEYMOUR AND McPEEK, MR. DURRANT, MR. REED, AND
DEPARTMENT ASSISTANTS

101-102. Physiology. Three credit hours. The year. Not open to freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant, Mr. Reed.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including dem-

*Not given in 1918-1919.

onstrations in circulation, digestion, respiration, gross and minute anatomy, reflex actions, and other simple phenomena of living organisms.

104. Chemical Physiology. Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Bleile.

A laboratory course with lectures and recitations. The course includes laboratory study of foods, digestion, secretions, excretions and blood, with a short period devoted to urinalysis.

106. Chemical Physiology. Five credit hours. Second semester. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the physiology of the body fluids, foods, digestion, absorption, excretion, and metabolism.

119-120. General Physiology. Three credit hours. The year. Not open to freshmen. Mr. Bleile.

A course similar to 101-102 open to students who have no credit in chemistry. (Students who have had chemistry will elect Physiology 101-102.) A course presenting the principles of physiology in a non-chemical manner.

Physiology 119 is given also during the second semester.

135-136. General Physiology. Four credit hours. The year. Two lectures and four laboratory hours each week. Elective. Prerequisite, a general course in chemistry. Not open to freshmen. Mr. Bleile, Mr. Durrant.

A general course in physiology, including lectures and laboratory work for students who have had some training in chemistry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations and assigned readings. The content of the course varies from year to year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation and secretion.

111-112. **Physiological Laboratory.** Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

FOR GRADUATES

201-202. **Advanced Physiology.**

203-204. **Research Work.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 200 University Hall

PROFESSORS SPENCER, COKER, AND COTTRELL

133-134. **Government in the United States.** Three credit hours. The year. Mr. Spencer, Mr. Coker.

A study of the organization, powers and practical workings of government in the United States—national, state and local, also of non-governmental political agencies such as parties. The first semester will be devoted to the federal government, the second semester to state and local government. The study will include at the outset a general survey of the field of political science. Not open to freshmen. It is strongly recommended that it be preceded by a year's work in European or American history.

Political Science 133 is given also during the second semester.

102. **The Governments of Europe.** Three credit hours. First semester. Prerequisite, Political Science 133-134. Mr. Spencer.

A comparative study of the principal countries of Europe, with particular attention to characteristic institutions; the English cabinet system; federal organization in Germany and Switzerland; the problem of imperial organization.

109-110. State, County and Municipal Government in Ohio. Three credit hours. The year. Prerequisite, Political Science 133-134. Mr. Cottrell.

The study covers the historical evolution and actual working of the governmental machinery and particular functions which it performs. It will deal with the constitutional, statutory and practical relations of the divisions of government; administrative officers and commissions; legislative practice and enactment; finances; relation between the State and minor subdivisions; working of different types of municipal charters; etc. Particular attention is given to the relation of the individual to the various divisions of government. The course provides a groundwork for those preparing to teach civics or engage in public service, journalism or civic secretarial work.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 203 Botany Building

PROFESSORS CLIFTON AND TWISS, ASSISTANT PROFESSOR AIKIN

101. Principles of Education. Three credit hours. Either semester. Prerequisite, Psychology 101-102; History of Education 101-102. By special permission, the History of Education may be taken concurrently with the above course.

A review of educational theory and the principles underlying teaching.

104. Observation, Criticism, and Practice. Three credit hours. Either semester. Prerequisite, Principles and Practice of Education 101.

A study of the general and special method; observation and criticism of classroom work in high school. Practice in teaching, ten weeks.

105. Biological Principles in Education. Three credit hours. First semester. Prerequisite, Physiology 101 or equivalent.

This course is for undergraduate students, but by additional prescribed readings and reports may be applied as graduate credit. This course investigates the principles of education from the standpoint of biology, anthropology, physiology and hygiene.

106. **Plant, Animal, and Human Behavior.** Three credit hours. Second semester. Prerequisite, Physiology 101 or 105, or a preparation adequate to do the work of the course.

A study of behavior in plants, animals and man in search for guiding educational principles.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. **Advanced Principles of Education.** Three credit hours. The year. Prerequisites, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

PSYCHOLOGY

Office, 403 University Hall

PROFESSORS ARPS AND PINTNER, ASSISTANT PROFESSORS WEISS AND BRIDGES, MR. EVANS, MR. CRANE, MISS GOUDGE, MR. CULLER, MISS COY, MISS BOWLER, AND DEPARTMENT ASSISTANTS

101-102. **Elementary Psychology.** Introductory course. Three credit hours. The year. All instructors.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

A limited number of beginning students in psychology may take 103-104 as equivalent to 101-102.

103-104. **Elementary Psychology.** Three credit hours. The year. Two lectures and one laboratory period each week. Mr. Weiss.

This course meets the same requirements as a prerequisite as Psychology 101-102. Designed for students who wish to perform some of the simpler psychological experiments in their elementary course.

The number of students admitted to this course is limited to forty.

107-108. **Educational Psychology.** Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner, Mr. Evans, Miss Goudge, Miss Coy.

Psychology 107 is given also in the second semester.

Psychology 108 is given also in the first semester.

111. Experimental Psychology: Introduction. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 101-102. Mr. Weiss.

A systematic training course in the psychological methods as applied to the sense fields. Topics: vision, audition, the cutaneous, olfactory, gustatory, kinesthetic and organic senses.

112. Experimental Psychology: Advanced. Three credit hours. Second semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A systematic training course in the psychological methods as applied to the more complex processes. Topics: perception, memory, attention, illusions, association and reaction time.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

This course is adapted to meet the needs of medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: nervous elements and their functions; end organs and their functions; cerebral functions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

127. Industrial Psychology. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Lectures, recitations, reports. Mr. Bridges.

The application of psychology to the following problems: vocational guidance, selection of industrial workers, industrial learning and training, the adaptation of technical to mental conditions, industrial monotony, fatigue, rest, and the length of the working day.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

114. Mental and Social Measurements. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Weiss.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education and the social sciences. Topics: standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

115-116. Genetic Psychology and Child Study. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Evans.

Psychology 115 treats of the development of mind together with the laws and principles which govern this development in the child. Psychology 116 treats of the various problems of child study and the child mind which concern the home, school and society.

***118. Perception and Behavior.** Two credit hours. First semester. This course alternates biennially with Psychology 153. Prerequisite, Psychology 104 or 111. Not open to first and second year students. Mr. Weiss.

A consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on, the original nature of man, the function of the nervous system, and the interaction among individuals.

***119. Animal Psychology.** Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

It is desirable that students shall have had work in zoology or experimental psychology.

A survey of animal behavior from the lower to the higher forms with especial emphasis upon the development of tropisms and instinctive reactions and their relation to the learning process in human behavior. A few typical experiments will be studied in the laboratory.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the

*Not given in 1918-1919.

respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feeble-minded. The causes of the same. Lectures, recitations and clinics.

124. Psychopathology. Two credit hours. Second semester. Prerequisite, Psychology 121. Mr. Bridges.

The so-called borderland phenomena; sleep and dreams, psychopathology of everyday life, hypnosis and the hypnotic state, hysteria, psychasthenia, neurasthenia, and the constitutional psychopathic states. Considerable attention will be given to the various interpretations of these phenomena. Lectures, recitations and reports.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

126. Folk Psychology. Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The psychic factors involved in various group activities which apply to the problems of education, religion and social aims.

128. Psychology of Advertising. Two credit hours. First semester. Prerequisite, Psychology 103-104 or 101-102. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and emotions to effective advertising. Lectures, reports and investigation of practical problems in the laboratory.

129-130. Advanced Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

This course is intended for students who desire a more detailed knowledge of the normal mental processes than is pos-

sible in an introductory course. A course fundamental to all fields of psychology and philosophy and to allied fields which involve human behavior. This course is mainly a consideration of the cognitive processes.

133-134. Mental Tests. Three credit hours. The year. Prerequisite, Psychology 112 or 107-108 or 121-122. Mr. Pintner.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

137-138. Psychology of Emotion and Volition. Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

A study of the various theories of feeling and emotion; the relation of the affective processes to the life of cognition; theories of volition; determinism; sources of action; diseases of the will and their relation to social problems.

***139-140. History of Psychology.** Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

The principal aim of this course is to trace modern psychology back to its historical antecedents. This will include a consideration of the early metaphysical and empirical tendencies, the development of the fundamental concepts of psychology, and a history of the most important psychological theories such as the theories of sensation, space perception, feeling and volition.

141-142. Minor Research. Two to four credit hours. The year. Prerequisite, at least twelve hours in psychology.

Investigation of minor problems in the various fields of psychology.

147-148. The Psychological Clinic. One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pintner, Mr. Evans.

Practical work in the diagnosis of defective and exceptional children.

*Not given in 1918-1919.

151-152. Criminal and Legal Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Crane.

A critical presentation of the evolution of the present day psychological conception of crime, with a study of the neurological basis of, and the nature of the stimuli to, anti-social behavior. There will be both a critical and experimental study of the psychological principles applied to the problems of testimony, those underlying recently advocated reforms in legal procedure, and the technique and reliability of suggested psychological methods for the detection of criminals.

153. Theoretical Psychology. Two credit hours. First semester. Alternating biennially with Psychology 118. Prerequisite, at least two years in psychology. Mr. Weiss.

Lectures, and assigned readings from Poincare, Pearson, Mach, Avenarius. The evolution of modern psychology as influenced by the development of the natural sciences with special emphasis on the nature of psychological problems, experiments and laws.

155. The Treatment of Exceptional Children. Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104, and permission of instructor. Not open to first and second year students. Mr. Evans.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children, both superior and inferior types. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual defects, moral eccentricities. Lectures, reports and practical work with children in the public schools.

FOR GRADUATES

201-202. Major Research.

203-204. Seminary in Psychology.

205-206. Contemporary Psychological Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 305 University Hall

PROFESSORS BOWEN, BRUCE AND INGRAHAM, ASSISTANT PROFESSORS HAMILTON, CHAPIN, AND PEIRCE, MR. CARDON, MR. GUIGOU, MR. GUTIERREZ, MR. RILEY, MR. BERTHEMY, MR. TAILLIART, AND
DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French except French 106. French 119-120 must be preceded by French 107, 109, and 110, or an equivalent.

The undergraduate courses offered in French, and to some extent in Spanish, beginning with third-year collegiate work, fall into two general groups: (1) literary, (2) linguistic and practical; so that students may emphasize one or both of these lines of study. For students who enter with two years of high school French and who desire to major in French the following outline course is recommended:

First year: French 103-104.

Second year: French 107 and 109-110.

Third year: French 108, 111-112 and 113-114 or 115-116.

Fourth year: French 119-120, and 122, 217-218.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar: Fraser and Squair's, or equivalent. Reader: Aldrich and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. All instructors.

Stress is laid first upon the acquisition of a correct pronunciation, after which the entire energy of the student is directed toward the attainment of a full and accurate reading knowledge of the language. Grammar and composition are made to contribute to this end. Sight reading is emphasized.

French 101 is given also during the second semester, and French 102 is given during the first semester.

103-104. Modern French Literature. Four credit hours. The year. Prerequisite, French 101-102 or an equivalent. Mr. Bruce, Mr. Hamilton, Mr. Chapin, Mr. Peirce, Mr. Cardon, Mr. Guigou, Mr. Berthemy.

The work of the year deals with the following subjects: (1) Contes; (2) The novel (Balzac or Hugo); (3) Lyric poetry; (4) Romantic drama (Hugo). Prose composition with practice in speaking. Systematic attention given to syntax and idiom. Lectures supplement the work. Private reading required.

French 103 is given also during the second semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, French 103. Mr. Chapin.

A course of rapid reading introductory to the vocabulary of scientific literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107. Advanced Prose Composition. Two credit hours. First semester. Mr. Bowen, Mr. Cardon.

Cameron's French Composition followed by other selections. Dictation. Conversation. The course is conducted mainly in French.

108. History of French Literature. Two credit hours. Second semester. Lectures and illustrative readings. Mr. Cardon, Mr. Riley.

109. Seventeenth Century Drama: Moliere and Corneille. Three credit hours. First semester. Mr. Bowen, Mr. Cardon.

Lectures on the growth of French comedy and tragedy. Critical study of representative plays of Molière, Regnard, and Corneille. Collateral reading. Assigned topics and reports.

110. Seventeenth Century Tragedy and Prose. Three credit hours. Second semester. Mr. Bowen, Mr. Cardon.

Representative dramas of Racine; Hachette's *Théâtre Choisi de Racine*. Study of Descartes, Pascal, La Bruyère and others; Warren's *Selections*. Lectures, with collateral reading and reports.

111. Eighteenth Century Drama. Two credit hours. First semester. Prerequisite, French 109 and 110. Mr. Bruce.

Lectures on French comedy after Molière, with work centering on Marivaux and Beaumarchais. Study of the drama of Voltaire. Collateral reading and reports.

112. Nineteenth Century Drama. Two credit hours. Second semester. Prerequisite, French 109 and 110. Mr. Bruce.

Tendencies of French drama during the nineteenth century, with special reference to Scribe, Augier, Dumas fils, and Sardou. Lectures, with collateral reading and reports.

***113. Recent French Prose.** Two credit hours. First semester. Given biennially, alternating with French 115. Mr. Bruce.

Rapid reading with lectures. Selections from the works of such writers as Bazin, Bourget, Loti, and Bordeaux.

***114. Practice in Speaking and Writing French.** Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 116. Mr. Cardon, Mr. Tailliat.

115. Eighteenth Century Prose. Two credit hours. First semester. Given biennially, alternating with French 113. Mr. Bruce or Mr. Bowen.

Selections from Voltaire (ed. Cohn and Woodward), Rousseau and others.

116. Advanced Conversational Practice. Two credit hours. Second semester. Students wishing to elect this course must have the consent of the instructor in charge. Given biennially, alternating with French 114. Mr. Cardon.

119-120. Old and Middle French. Two credit hours. The year. Mr. Bowen.

Studies in old French (with emphasis on la Chanson de Roland) and in the language and writers of the sixteenth century. Special consideration of Montaigne.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Bowen.

Historical and critical survey of the methods of teaching French. The teacher's equipment. Class room aids. Special problems and difficulties in the teaching of French. Lectures; discussions; practice in conducting recitations.

*Not given in 1918-1919.

ITALIAN

101-102. **Elementary Italian.** Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Students are advised to postpone the election of this course until they have completed French 101-102 or an equivalent. Mr. Guigou.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. **The Italian Novel.** Two credit hours. First semester. Prerequisite, Italian 101-102. Mr. Bruce.

Manzoni (*I Promessi Sposi*, and others). Lectures.

104. **Dante.** Two credit hours. Second semester. Prerequisite, Italian 103. Mr. Bruce.

Selections from the *Inferno* and *Paradiso*. Lectures.

SPANISH

101-102. **Elementary Spanish.** Four credit hours. The year. Mr. Ingraham, Mr. Hamilton, Mr. Chapin and department assistants.

Grammar: Ingraham-Edgren's and Ingraham's *Victoria y Otros Cuentos*. Easy prose and plays. Composition and practice in speaking.

Spanish 101 is given also during the second semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. **Modern Spanish Literature.** Four credit hours. The year. Prerequisite, Spanish 101-102 or an equivalent. Mr. Ingraham, Mr. Hamilton, Mr. Chapin.

The modern novel and drama. Lectures covering a survey of the literature. Composition and practice in speaking continued.

105. **Cervantes: *Don Quijote*.** Two credit hours. First semester. Prerequisite, Spanish 103-104. Mr. Ingraham.

106. **Lope de Vega and Calderon.** Two credit hours. Second semester. Prerequisite, Spanish 105. Mr. Ingraham.

107. **The Pastoral Novel and the Romance of Roguery.** Two credit hours. First semester. Prerequisite, Spanish 103-104. Mr. Ingraham.

108. **Contemporaries of Lope de Vega and Calderon.** Two credit hours. Second semester. Prerequisite, Spanish 107. Mr. Ingraham.

110. **Commercial Reading and Correspondence.** Four credit hours. Second semester. Prerequisite, Spanish 103. Mr. Chapin.

A course designed to familiarize students with the vocabulary of business and with the forms of Spanish commercial paper and correspondence.

111. **The Teaching of Spanish.** Two credit hours. First semester. Prerequisite, four semesters of collegiate Spanish or its equivalent. Open to seniors and graduates. Mr. Ingraham.

Methods of teaching modern languages. Recitation from and discussion of a recent book on the subject. Reviews and discussion of recent text-books. The teacher's equipment. Class room aids. Lectures; discussions; practice in conducting recitations.

112. **Advanced Conversation and Composition.** Three credit hours. Second semester. Prerequisite, four semesters of college Spanish or an equivalent. Mr. Gutierrez.

Designed for persons desiring to use Spanish practically and for prospective teachers. One hour per week will be devoted to written composition and two to oral composition.

FOR GRADUATES

201-202. **Introduction to Romance Philology.**

203-204. **Old Provencal.**

205-206. **History of the Literary Movement in France in the First Half of the Nineteenth Century.**

207-208. **Research in French Literature.**

209-210. **Research in Spanish Literature.**

211-212. **Old Spanish.**

213. **Nineteenth Century French Lyric.**

215. **Seminary in Moliere.**

216. **Seminary in Moliere and his Successors.**

217-218. **Seminary in French Literature.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS

Office, 123 Townshend Hall

ASSISTANT PROFESSORS T. D. PHILLIPS, FALCONER, AND ERDMAN,
MR. LANTIS

101. Farm Accounting. Two credit hours. Either semester. Mr. Phillips.

Lectures and practice work. The course deals with the general principles of accounting and their application to farm business. Systems of keeping farm records that are best adapted to different methods of farming are studied.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

110. Rural Community Life. Three credit hours. Second semester. Prerequisite, Economics 101 or Sociology 101.

Lectures and recitations on rural organizations and community life. The rural church, rural school, rural home, and farmers' organizations and their bearing upon country life are studied.

FOR GRADUATES

201-202. Research Work.

For description of graduate course in this department see the Bulletin of the Graduate School.

SCHOOL ADMINISTRATION

Office, 203 Botany and Zoology Building

PROFESSORS BROWN AND McCRACKEN

101. Public Education in the United States. Three credit hours. Either semester. Three lectures each week and assigned readings. Required of all students in the College of Education, except teachers in service, who may take 105. Elective to others. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

An introductory survey of public education in the United States, as the expression and promoter of democracy. School laws, regulations and decisions of Ohio. Credit for both 101 and 105 will not be given.

105. Public Education in the United States. Two credit hours. Either semester. Two lectures each week, and assigned readings. Open to teachers, supervisors, principals, and superintendents in active service, subject to the approval of the instructor in charge. Required of all such enrolled in the College of Education who do not take 101. Elective to all such if enrolled in other colleges. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

Credit for both 101 and 105 will not be given.

(This course is an abridgment of School Administration 101 and will be offered on Saturdays or evenings.)

FOR ADVANCED UNDERGRADUATES AND GRADUATES

102. State School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit, one year of experience. Mr. Brown.

A comparative study of the school systems of the various American states including such topics as federal and state policies, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, the state and non-state education.

103. Rural Education. Two credit hours. First semester. Two lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit, one year of experience. Mr. McCracken.

Problems affecting the organization, administration, supervision and inspection of rural schools.

104. School Hygiene. Two credit hours. Second semester. Two lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit, one year of experience. Mr. McCracken.

A study of school hygiene, including such topics as communicable diseases, hygiene of vision, of hearing, and of teeth, nutrition, hygiene of instruction, health of the teacher, fatigue, and equipment of buildings and grounds.

111. **The Administration of Secondary Schools.** Three credit hours. First semester. Three lectures each week, assigned readings and reports. Elective. Prerequisite, junior standing, and for graduate credit, one year of experience in addition to 101 or 105. Mr. Brown.

Historical forerunners of the high school, types of high schools, aims of secondary education, relation to higher and elementary education, high schools of the North Central States, curricula and time schedules, college entrance requirements, buildings, equipment, texts, supplies, support, and cost. Credit will not be given for both 111 and 117.

112. **The Administration of Secondary Schools.** Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit, one year of experience in addition to 101 or 105. Mr. Brown.

Retardation, elimination, overage, delinquency, student activities, grading, records, reports, hygiene, sanitation, health; preparation, selection, assignment, tenure, and pay of teachers. Credit will not be given for both 112 and 118.

113. **The Administration of Elementary Schools.** Three credit hours. First semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit, one year of experience in addition to 101 or 105. Mr. McCracken.

Aims, organization, and control, types of schools, curricula, schedules, texts, supplies, relation to secondary and vocational education, buildings, equipment, grounds, support and cost. Credit will not be given for both 113 and 119.

114. **The Administration of Elementary Schools.** Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing and for graduate credit, one year of experience in addition to 101 or 105. Mr. McCracken.

Retardation and elimination, individual differences, grading and promotions, efficiency tests and records, delinquents and defectives, student activities. Teacher: training, selection, promotion, tenure, salaries, pension, organizations. Credit will not be given for both 114 and 120.

115. Educational Statistics. Two credit hours. First semester. Two lectures each week, assigned readings and problems. Elective. Open to superintendents, principals, and graduates of experience, by permission of the instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. City School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to seniors and graduates. Prerequisite, for seniors, six hours of school administration; for graduate credit, six hours of school administration and one year of experience. Mr. McCracken.

A comparative and critical study of several types of existing city school systems. A thesis on some problem required of each student.

117. Problems of High School Administration. Two credit hours. First semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit, one year of experience. Mr. Brown.

Credit for both 111 and 117 will not be given.

(This course is an abridgment of School Administration 111 and will be offered Saturdays and evenings.)

118. Problems of High School Administration. Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit, one year of experience. Mr. Brown.

Credit for both 112 and 118 will not be given.

(This course is an abridgment of School Administration 112 and will be offered Saturdays or evenings.)

***119. Problems of Elementary School Administration.** Two credit hours. First semester. Two lectures each week, assigned

*Not given in 1918-1919.

readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit, one year of experience. Mr. McCracken.

Credit for both 113 and 119 will not be given.

(This course is an abridgment of School Administration 113 and will be offered Saturdays or evenings.)

***120. Problems of Elementary School Administration.** Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit, one year of experience. Mr. McCracken.

Credit for both 114 and 120 will not be given.

(This course is an abridgment of School Administration 114 and will be offered Saturdays or evenings.)

133-134. The Administration of Higher Education. Three credit hours. The year. Three lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates, by permission of the instructor in charge. Prerequisite, eight hours of school administration and two years of experience. Mr. Brown.

A comparative study of various types of control, organization, and administrative policies as illustrated in selected colleges, universities, technical schools, junior colleges, normal schools and normal colleges.

FOR GRADUATES

201. Seminary in School Administration.

202. Seminary in School Administration.

For description of graduate courses in this department see the Bulletin of the Graduate School.

AGRICULTURAL EDUCATION

122. The Teaching of Agriculture in the High School. Two credit hours. Second semester.

*Not given in 1918-1919.

The administrative phases of secondary agriculture, the application of the principles of pedagogy to the teaching of agriculture in the high school, and the organization of agricultural materials into secondary courses of study will constitute the essential features. Intended for superintendents, principals and teachers of secondary agriculture in the high schools of the state. Text-book: Bricker's "The Teaching of Agriculture in the High School."

123-124. The Elements of General Agriculture. Three credit hours. The year.

This course is designed to furnish a general fund of knowledge of the science and art of agriculture as a basis for pedagogical study, and preparation to teach either elementary or secondary agriculture in the public schools of Ohio. It will also furnish an excellent basis for the further pursuit of the more specialized divisions of agriculture offered in the College of Agriculture. The work of the first semester will consist of plant studies, animal studies, and studies in farm management; and machine studies, soil studies, and studies of the conditions of plant growth will be considered during the second semester. The last topic will include work in the greenhouse, the demonstration field, and investigations of plant diseases and insect pests, together with remedial measures.

127. History of Agricultural Education. Two credit hours. First semester.

A survey of the rise and development of agricultural instruction in the United States. The land-grant colleges, the agricultural experiment stations, secondary and elementary school instruction, farmers' institutes, agricultural societies, the club movement, etc. Ohio agricultural educational institutions.

132. Teaching of Elementary Agriculture. Two credit hours. First semester.

This course is designed to meet the pedagogical requirements of township superintendents, rural teachers, and teachers in village elementary schools. The present status of agricultural instruction in the elementary schools, the arrangement of the materials of elementary agriculture into a course of study,

the methods of presentation of the subject matter, and the organization and use of popular auxiliaries to public school instruction in agriculture will be considered.

SHOPWORK

Office, 125 Shop Building

PROFESSOR SANBORN, ASSOCIATE PROFESSOR W. A. KNIGHT, MR. CASE, MR. BEEM, MR. FOUST, MR. DENMAN, MR. BRECKUR, AND DEPARTMENT ASSISTANTS

105. **Foundry Work.** Two credit hours. Either semester. Manual Training, first year. Mr. Beem, Mr. Breckur.

115. **Forging.** Two credit hours. Either semester. Manual Training, third year. Mr. Foust, Mr. Wright.

118. **Advanced Forging.** Two credit hours. Second semester. Prerequisite, Shopwork 115. Manual Training, fourth year. Mr. Foust.

119. **Machine Work.** Three credit hours. Either semester. Manual Training, third year. Mr. Knight, Mr. Case.

121. **Advanced Machine Work.** Three credit hours. Either semester. Prerequisite, Shopwork 119. Optional, Manual Training, fourth year. Mr. Knight, Mr. Case.

123. **Advanced Machine Work.** Two credit hours. First semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

125. **Construction Work.** Two credit hours. Either semester. Prerequisite, Shopwork 121. Elective. Mr. Knight.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN AND OSBORN, ASSOCIATE PROFESSOR HINE, ASSISTANT PROFESSORS BARROWS, KRECKER, AND METCALF, MR. KOSTIR, MR. DE LONG, AND DEPARTMENT ASSISTANTS

For those students desiring to receive a recommendation for the teaching of zoology in secondary schools the department suggests that in addition to the introductory course, Zoology 101-102, one or more of the following courses be taken: 107-108, Economic Entomology; 121-122, Invertebrate Morphology; 131-132, Evolution; 159-160, Animal Ecology.

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Lectures and laboratory. Mr. Osburn, Mr. Barrows, Mr. Kreckler, Mr. Kostir, Mr. De Long, and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology, and to serve as a foundation for more advanced courses.

Zoology 101 is given also during the second semester.

115. General Principles of Heredity. Three credit hours. Either semester. Three lecture periods. Elective. Prerequisite, Zoology 101-102 or Botany 101-102 or equivalent. Mr. Barrows.

A study of heredity in animals and plants to serve as an introduction to heredity as a basis for advanced work in plant and animal breeding and as an aid in the analysis of biological and sociological problems into which the question of heredity enters. The subject will be presented in lectures, illustrated with lantern slides and actual specimens. Exercises in the form of problems will be assigned. The different types of heredity studied will be chosen from the animal and plant material which best illustrates the subject. Hereditary characters found in man will be used to a large extent. The course will be made as simple and practical as the subject will permit. Present day theories and technical applications will be left for discussion in the more advanced courses to which they properly belong.

121-122. Advanced Zoology of Invertebrates. Three credit hours. The year. One lecture and two laboratory periods. Elective. Prerequisite, Zoology 101-102 or equivalent. Mr. Kostir.

A study of the structure, life histories, habits and relationships of invertebrate animals, together with the consideration of important biological principles. Lectures, laboratory exercises, and occasional field trips.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osborn.

The facts and theories of the origin, development, and distribution of animal life. The general order of treatment is: historical aspects, evidences, factors and modern theories. The

relation of evolutionary doctrine to practical problems is emphasized.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year in biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year in biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

159-160. Animal Ecology. Three to five credit hours. The year. Prerequisite, Zoology 101-102, and one additional year of a biological science. Mr. Krecker.

A study of animals in their habitats and of the factors involved. Field work, lectures and laboratory.

FOR GRADUATES

201-202. Seminary in Zoology.

223-224. Invertebrate Embryology.

241-242. Research Work.

247-248. Invertebrate Zoology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. Economic Entomology. Three credit hours. The year. Prerequisite, Zoology 101-102 or equivalent. Mr. Metcalf and assistants.

An elementary course on structure, physiology, development and habits of insects, as a basis for insect control and for special

study in entomology; followed by a general systematic survey of insects, mites and ticks with special attention to beneficial species and those injurious to farm, orchard, garden, forest, household, mill and storehouse and the health of man and domestic animals.

Lectures, quizzes, problems and laboratory work on general anatomy, life-stages, field observations of habits and damage and the preparation and application of remedial measures. Students are required to prepare a collection. Those desiring to collect specimens in advance should get printed instructions from the department.

FOR GRADUATES

201-202. Seminary in Entomology.

241-242. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

TIME SCHEDULE

COLLEGES OF ARTS AND EDUCATION

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect, provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Departments of Instruction without first consulting the secretary of their college.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours per semester of the course.

KEY TO ABBREVIATIONS

- Bi.—Biological Building
- B. Z.—Botany and Zoology Building
- Br.—Brown Hall
- Ch.—Chemistry Hall
- Ha.—Hayes Hall
- H. E.—Home Economics Building
- H. F.—Horticulture and Forestry Building
- L.—Library
- Lo.—Lord Hall
- Obs.—Observatory
- O.—Orton Hall
- P.—Page Hall
- Pav.—Judging Pavilion
- Ph.—Physics Building
- R. L.—Robinson Laboratory
- S.—Shop Building
- T.—Townshend Hall
- U.—University Hall
- V. C.—Veterinary Clinic
- V. L.—Veterinary Laboratory
- L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

AGRICULTURAL CHEMISTRY AND SOILS

AGRICULTURAL CHEMISTRY

Course No.	Hours	Time	Room	Instructor
—123	4	L., Tu., at 9	T. 205	Lyman, Phillips
		Tu., at 2	T. 205	
		Q., Th., at 9	T. 205	
		Th., at 2	T. 205	
		Lab., M., W., 8 to 11	T. 210	
		Tu., Th., 1 to 4	T. 210	

SOILS

—152	5	L., M., W., at 8	T. 205	Vivian
		M., W., at 1	T. 205	
		Q., F., at 8	T. 205, 204, 200	
		F., at 1	T. 205, 204, 200	
		Lab., Tu., Th., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	

AGRICULTURAL ENGINEERING

101—	4	M., W., F., at 3	H. E. 321	Ramsower, Potter
		Lab., Tu., 8 to 11		
		W., 8 to 11		
		Th., 8 to 11		
—101	4	M., Th., F., at 11	H. E. 321	Ramsower, Potter
		Lab., Tu., 1 to 4		
		W., 1 to 4		
		Th., 1 to 4		

AMERICAN HISTORY

101—102	3	M., W., F., at 8	U. 205	Wood
		M., W., F., at 8	U. 209	Wittke
		M., W., F., at 9	U. 205	Hockett
		M., W., F., at 9	L. 107	Schlesinger
		M., W., F., at 10	U. 209	Wittke
		M., W., F., at 10	L. 107	Schlesinger
		M., W., F., at 1	U. 205	Hockett
		M., W., F., at 1	U. 209	Wood
		M., W., F., at 3	U. 205	Wittke
		M., W., F., at 3	U. 209	Wood
		M., W., F., at 4	U. 205	Wittke
—101	3	M., W., F., at 2	U. 205	Wittke
109—110	2	Tu., Th., at 8	U. 205	Schlesinger
111—112	3	M., W., F., at 8	L. 303	Schlesinger
119—	2	Tu., Th., at 3	L. 303	Hockett
121—	2	Tu., Th., at 9	U. 205	Knight

AMERICAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
123—124	3	M., W., F., at 9	U. 209	Knight
125—126	2	Tu., Th., at 10	U. 205	Wood
—128	2	Tu., Th., at 3	U. 205	Hockett
205—206	2	W., 4 to 6	L. 303	Knight, Hockett
209—210	3	M., W., F., at 10	U. 205	Hockett

ANATOMY

101—102	3 or 5	L., W., at 1 Lab., W., Th., F., 1 to 4	Bio. 102	Baker
103—104	3 to 5	L., Tu., at 1 Lab., W., Th., F., 1 to 4	Bio. 107	Landacre
105—106	3 to 5	To be arranged	Bio. 102	Baker
107—108	3 to 5	L., Tu., at 4 Lab., M., Tu., 1 to 4	Bio. 102	Knouff
109—110	3 to 5	To be arranged	Bio. 106	Landacre
111—112	1	M., at 4	Bio. 101	Landacre
113—114	3 to 5	To be arranged	Bio. 107	Landacre
—116	3	To be arranged		
—118	3 to 5	L., Tu., at 8	Bio. 100	Landacre
(pre-med)		Th., at 1	Bio. 102	Baker
		Lab., { Tu., 9 to 11 { Th., 8 to 11 { Tu., 1 to 4 { Th., 2 to 4		
		For 5 hrs. credit F., 1 to 4 additional		
119—120	3 to 5	To be arranged		Baker
121—	6	Tu., W., Th., F., 1 to 5	Park St. 410	Buck
—122	4	Tu., W., Th., 1 to 5	Park St. 410	Buck
125—	4	M., Tu., W., Th., F., 4 to 6	Park St. 409	Smith
—126	4	M., Tu., W., Th., F., 4 to 6	Park St. 409	Smith
127—	3 to 5	L., W., F., at 8 Lab., W., 9 to 12	Park St. 410	Buck
131—	3	To be arranged	Park St. 410	Buck
133—	6	L., M., W., F., at 8 M., at 1	Park St. 400	Landacre
		Lab., M., W., F., 9 to 12	Park St. 413	Warren
—134	4	To be arranged		Landacre,
—136	4	L., M., W., F., at 8 M., at 1	Park St. 400	Warren Landacre
		Lab., M., W., F., 9 to 12 F., 1 to 5	Park St. 408 Park St. 413	Buck Warren
139—140	3	L., Tu., Th., at 8 Lab., Th., 9 to 12	Park St. 400 Park St. 413	Warren
—142	4	L., M., F., at 8 Lab., W., 1 to 5	Bio. 100	Knouff

ANATOMY—Continued

Course No.	Hours	Time	Room	Instructor
143—	5	L., M., W., F., at 1 Lab., M., W., F., 2 to 4	Bio. 100	Knouff
145—	4	To be arranged		Landacre
149—150	3 to 5	To be arranged	Park St. 413	Warren
—152	3	To be arranged	Park St. 410	Landacre, Buck
201—202	3 to 5	To be arranged		Landacre
203—204	5 to 10	To be arranged		

ANIMAL HUSBANDRY

135—	4	L., M., W., F., at 4 Lab., Tu., 8 to 10 Th., 8 to 10	Pav.	Coffey
—135	4	L., M., W., F., at 10 Lab., M., 1 to 3 W., 1 to 3	Pav.	Coffey
137—	3	L., M., W., F., at 9	Pav.	Kays
—137	3	L., M., W., F., at 3	Pav.	Conklin

ART

117—	3	M., W., F., at 8	H. F. 218	Robinson
119—119	1	M., at 4	H. F. 200	Kelley
121—	2	Tu., Th., 9 to 11	H. F. 206	Talbot
—121	2	Tu., Th., 1 to 3	H. F. 206	Talbot
131—	2	M., W., 8 to 10	H. F. 206	Norris
		M., W., 1 to 3	H. F. 206	Talbot
		Tu., Th., 8 to 10	H. F. 206	Christensen, Norris
		Tu., Th., 1 to 3	H. F. 206	Robinson, Christensen
—131	2	Tu., Th., 8 to 10	H. F. 206	Norris
132—	2	M., W., 1 to 3	H. F. 206	Kelley
—132	2	Tu., Th., 8 to 10	H. F. 206	Christensen
		M., W., 9 to 11	H. F. 206	Norris
133—	2	M., W., 9 to 11	H. F. 206	Norris
		W., F., 9 to 11	H. F. 206	Robinson
—133	2	Tu., Th., 2 to 4	H. F. 206	Robinson
134—134	3	Tu., Th., 8 to 11	H. F. 206	Kelley
135—135	4	Tu., Th., 1 to 4	H. F. 206	Norris
136—	2	Tu., Th., 8 to 10	H. F. 206	Robinson
—136	2	M., W., 9 to 11	H. F. 206	Robinson
		Tu., Th., 9 to 11	H. F. 206	Robinson
—137	3	M., W., 8 to 11	H. F. 206	Robinson
138—	3	To be arranged	H. F. 206	Kelley
—139	3	To be arranged	H. F.	Kelley
141—	2	Tu., Th., at 10	H. F. 204	Christensen

ART—Continued

Course No.	Hours	Time	Room	Instructor
—141	2	Tu., Th., at 8	H. F. 204	Robinson
		Tu., Th., at 10	H. F. 204	Talbot
		Tu., Th., at 1	H. F. 204	Christensen
		Tu., Th., at 3	H. F. 204	Christensen
142—	3	M., W., 8 to 10	H. F. 206	Talbot
—142	3	M., W., 8 to 10	H. F. 206	Talbot
—143	3	M., W., 2 to 4	H. F. 206	Talbot
—144	3	M., W., 8 to 10	H. F. 206	Norris
—145	3	To be arranged		
151—152	3	M., W., F., at 8	H. F. 204	Kelley
—151	3	M., W., F., at 10	H. F. 204	Kelley
153—	3	M., Th., F., at 11	H. F. 204	Christensen
154—155	2	Tu., Th., at 2	H. F. 204	Christensen
—156	2	Tu., Th., at 4	H. F. 204	Robinson
157—	3	M., W., F., at 3	H. F. 204	Kelley
—158	5	To be arranged	H. F.	Kelley
—160	3	M., W., F., at 3	H. F. 204	Kelley
161—162	2	Tu., Th., 9 to 11	H. F. 206	
163—164	2	Tu., 8 to 10; W., 10 to 12	H. F. 206	

ASTRONOMY

101—102	3	M., W., F., at 8	Obs.	
		M., W., F., at 1	Obs.	
104—	3	M., W., F., 2 to 4	Obs.	Lord
—105	3	Tu., 8 to 11; W., F., at 3	Obs.	Lord
107—108	3 to 5	To be arranged	Obs.	Lord
109—110	4	To be arranged	Obs.	Lord
111—112	3 to 5	To be arranged	Obs.	

BACTERIOLOGY

—102	2	L., Th., at 8	V. L. 8	Masters
		Lab., Th., 1 to 4	V. L. 201	Masters
107—	4 or 5	L., M., W., at 9	V. L. 101	Morrey
		M., W., at 2	V. L. 101	Morrey
		Tu., Th., at 9	V. L. 101	Morrey
		Lab., Tu., Th., 8 to 11	V. L. 8, 201, 205	Starin, Masters, Froning
		Tu., Th., 1 to 4	V. L. 8	Froning
		M., W., 8 to 11	V. L. 201, 205	Masters, Froning
		M., W., 1 to 4	V. L. 8	Froning
—108	2 to 5	L., M., W., at 9	V. L. 102	Morrey
		M., W., at 2	V. L. 102	Morrey
		Lab., M., W., 8 to 11	V. L. 205	Froning
		M., W., 1 to 4	V. L. 205	Froning

BACTERIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., 1 to 4; S., 8 to 11	V. L. 205	Froning
—110	2 to 5	L., Tu., Th., at 9 Lab. to be arranged	V. L. 102	Morrey Morrey, Masters
—112	2 to 5	L., Tu., Th., at 10 Lab. to be arranged	V. L. 102	Morrey Morrey, Masters
—114	2 to 5	L., Tu., Th., at 11 Lab. to be arranged	V. L. 102	Morrey Morrey, Masters
—116	2 to 5	L., M., W., at 8 Lab. to be arranged	V. L. 102	Froning
117—118	2 to 5	L., W., F., at 1 Lab., M., S., 9 to 11	V. L. 101 V. L. 8	Starin Starin
119—120	2 to 5	L., M., F., at 11 Lab. to be arranged	V. L. 101	Starin Starin
121—122	3 to 5	To be arranged		Morrey
123—124	3 to 5	To be arranged		Morrey
125—126	3 to 5	To be arranged		Morrey, Starin, Froning, Masters
131—132	4	L., W., F., at 8 Lab., W., F., 9 to 12	V. L. 101 V. L. 8	Starin Starin
141—	6	L., M., W., at 1 Lab., M., W., 2 to 5 and Tu., Th., F., 1 to 5	V. L. 102 V. L. 201 V. L. 205	Morrey Morrey, Masters Morrey, Starin
—150	4	L., W., F., at 10 Lab., Tu., Th., 9 to 12	V. L. 102 V. L. 201	Masters Masters

For Short Courses Only

51—	4	M., Tu., Th., F., at 11	V. L. 102	Morrey
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BIBLICAL LITERATURE

101—102	3	M., Th., F., at 11	H. E. 218	Breyfogle
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BIBLIOGRAPHY

101—102	1	Tu., at 3	Li. 107	Jones
103—	½	Th., at 3	Li. 107	Reeder
		F., at 11	Li. 107	Reeder
105—105	2	M., W., at 4	Li. 107	Reeder

BOTANY

Course No.	Hours	Time	Room	Instructor
101—102	3	L., M., W., at 8	B. Z. 109, 110	Sampson,
		M., W., at 9	B. Z. 208, 109	Griggs,
		M., W., at 10	B. Z. 109, 110	Stover,
		M., W., at 1	B. Z. 109, 208	Detmers
		M., W., at 2	B. Z. 110, 208	
		M., W., at 3	B. Z. 110, 208	
		Lab., Tu., 8 to 10	B. Z. 108	
		Tu., 1 to 3	B. Z. 108	
		W., 8 to 10	B. Z. 108	
		W., 1 to 3	B. Z. 108	
		Th., 8 to 10	B. Z. 108	
		Th., 1 to 3	B. Z. 108	
		F., 8 to 10	B. Z. 108	
		F., 1 to 3	B. Z. 108	
107—108	2	To be arranged	B. Z. 108	Detmers
110—	2	W., 1 to 4	B. Z. 108	Griggs
—116	3	L., M., W., at 10	B. Z. 208	Stover
		Lab., F., 10 to 12	B. Z. 206	
117—118	3	L., Tu., at 9	B. Z. 110	Transeau
		Lab., W., 1 to 5	B. Z. 66	
—120	3	S. and M. arranged	B. Z. 210	Griggs
121—	3	L., W., at 1	B. Z. 110	Schaffner
		Lab., W., 2 to 4	B. Z. 62	
123—124	4	L., Tu., Th., at 10	B. Z. 208	Griggs
		Lab. to be arranged	B. Z.	
125—126	4	L., Tu., Th., at 8	B. Z. 109	Transeau
		Lab., Tu., Th., 1 to 3	B. Z. 112	
		Tu., Th., 3 to 5	B. Z. 112	
127—128	4	L., Tu., Th., at 11	B. Z. 110	Stover
		Lab., M., W., 8 to 10	B. Z. 210	
129—130	3 to 5	M., 1 to 4; other hours arranged	B. Z. 60	Schaffner
133—134	3 to 5	To be arranged		All instructors
135—136	1	Tu., at 4	B. Z. 110	Schaffner
137—138	1	M., at 4	B. Z. 110	Schaffner
139—140	3	To be arranged	B. Z. 210	Stover
—142	2	Th., 1 to 4	B. Z. 62	Schaffner
—150	3	M., at 9; W., 9 to 11	B. Z. 110, 112	Transeau
151—	3	To be arranged	B. Z.	Sampson
201—202	3 to 10	To be arranged	B. Z. 104	Schaffner,
				Griggs
203—204	4 to 10	To be arranged	B. Z. 104	Schaffner,
				Griggs
205—206	4 to 10	To be arranged	B. Z. 112	Transeau
207—208	3 to 10	To be arranged	B. Z. 210	Griggs,
				Stover
209—210	1	To be arranged	B. Z.	Schaffner

BOTANY—Continued **For Short Courses Only**

Course No.	Hours	Time	Room	Instructor
91—	4	M., W., at 8 Lab., Tu., Th., 1 to 3	B. Z. 208 B. Z. 206	Stover

CHEMISTRY

101—102	4	To be arranged		
105—106	4	L., M., at 8 W., at 9 M., at 1 W., at 2 Q., W., at 8 F., at 8 F., at 9 F., at 11 W., at 1 F., at 1 F., at 2 Lab., M., W., 8 to 11 Tu., Th., 8 to 11 F., S., 8 to 11 M., W., 1 to 4 Tu., Th., 1 to 4	Ch. 200 Ch. 200 Ch. 200 Ch. 200 Ch. 101, 302 Ch. 302 Ch. 101, 302 Ch. 302 Ch. 101, 302 Ch. 101, 302 Ch. 101, 302 Ch. 101, 302	Day and De- partment Assistants
—105	4	Tu., W., Th., at 4; S., 8 to 12	Ch. 207	
109—110	4	L., F., at 10 F., at 3 Q., M., at 10 M., at 3 W., at 10 W., at 3 Lab., M., W., 8 to 11 Tu., Th., 8 to 11 F., S., 8 to 11 M., W., 1 to 4 Tu., Th., 1 to 4	Ch. 200 Ch. 200 Ch. 207 Ch. 101, 302 Ch. 101, 207 Ch. 101, 302	Day and De- partment Assistants
—109	4	Tu., W., Th., at 4; S., 8 to 12	Ch. 101	
113—114	2	Tu., Th., at 1	Ch. 200	Henderson, Mellon
117—	3	To be arranged		Olin
119—120	4	L., F., at 10 M., at 3 Lab. open mornings and afternoons	Ch. 207 Ch. 200	Foulk Foulk
121—	4	L., M., at 3 Lab., Tu., W., 1 to 4	Ch. 207	Foulk

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
—124	1	Th., at 3	Ch. 200	Foulk, Hollingsworth
127—	4	M., Tu., Th., F., at 11	Ch. 200	Boord
—132	2	Tu., at 11; F., at 4	Ch. 101	
—136	2	Tu., Th., at 11	Ch. 207	Foulk
—140	4	Thesis—To be arranged		
150—	3	Tu., Th., at 9; S., at 11	Ch. 101	Evans
	5	{ Tu., Th., at 9; S., at 11 Lab., Tu., Th., 1 to 4 M., 2 to 5; Tu., Th., 10:30 to 12		
151—152	2	Tu., Th., at 8	Ch. 200	
153—154	2 or 3	Laboratory open afternoons		Boord
155—156	2	To be arranged		Boord
157—158	3	M., W., F., at 8	Ch. 207	Henderson
159—	3	M., W., F., at 9	Ch. 207	Henderson
161—161	2 or 3	Laboratory open daily 8 to 12 and 1 to 4		Henderson, Mellon
165—	2	M., W., at 11	Ch. 207	Foulk
167—	3 to 5	To be arranged		Olin
—168	3 to 5	L., Tu., at 9 Lab. to be arranged	Ch. 207	Olin
169—	3 to 5	To be arranged		Foulk
—176	3	M., F., at 11	Ch. 207	Foulk
177—	2	M., S., at 11	Ch. 302	Withrow
—178	1	S., at 11	Ch. 207	Withrow
—182		Inspection trip		
—184		Report		
185—	2	M., 1 to 4; S., 8 to 11	Ch. 207	Withrow, Coith
—186	3	M., 1 to 4; S., 8 to 11 and one period to be arranged	Ch. 207	Withrow, Coith
187—187	3	Laboratory open afternoons		Henderson, Mellon
—192	2	Tu., Th., at 8	Ch. 207	Henderson
—194	2	M., 10 to 12	Ch. 302	Withrow
—196	2	M., Th., at 11	Ch. 101	Henderson
201—202	3	To be arranged		Henderson
205—206	2 or 3	To be arranged		Boord
209—210	3	To be arranged		Henderson
213—	2	M., Th., at 11	Ch. 101	Henderson
215—	2	Tu., 4 to 6	Ch. 302	
—216	2	Tu., 4 to 6	Ch. 302	Boord
225—226	2	To be arranged		Withrow
227—	2	To be arranged		Foulk
235—236	5 to 10	To be arranged		

COMPARATIVE LITERATURE

Course No.	Hours	Time	Room	Instructor
111—112	1	M., at 3	U. 306	Elden
195—	2	Tu., F., at 4	U. 306	Bolling

DAIRYING

101—	4	M., W., F., at 10 Lab., Tu., 1 to 4 F., 1 to 4	T. 200 T. 3, 5, 10 T. 3, 5, 10	Stoltz
—101	4	M., W., F., at 4 Lab., Tu., 8 to 11 F., 8 to 11	T. 200 T. 3, 5, 10 T. 3, 5, 10	Stoltz

ECONOMICS AND SOCIOLOGY

ECONOMICS

101—102	3	M., W., F., at 8 M., W., F., at 8 M., W., F., at 9 M., W., F., at 9 M., W., F., at 10 M., W., F., at 10 M., Th., F., at 11 M., W., F., at 1 M., W., F., at 1 M., W., F., at 2 M., W., F., at 3	P. 12 P. 13 P. 12 P. 13 P. 12 P. 13 P. 12 P. 12 P. 13 P. 12 P. 12	Bice Drury Lockhart Ruggles Hammond Drury Gephart Drury Gephart
—101	3	M., W., F., at 8 M., W., F., at 3	P. 7 P. 9	Walradt
102—	3	M., W., F., at 2	P. 13	
103—104	2	Tu., Th., at 9	P. 6	Huntington
105—	2	Tu., Th., at 8	P. 12	Ruggles
—106	2	Tu., Th., at 8	P. 12	Walradt
107—108	3	M., W., F., at 9	Ph. 304	de Haas
109—	3	M., W., F., at 8	Ph. 304	Weidler
—112	2	Tu., Th., at 8	P. 6	Weidler
119—120	3	M., W., F., at 2	P. 9	Mark
127—128	2	Tu., Th., at 1	P. 12	Lockhart
132—	3	M., W., F., at 1	P. 6	Huntington
—133	3	M., W., F., at 1	P. 6	Huntington
139—	3	L., Tu., Th., at 8 Tu., Th., at 9 Tu., Th., at 9 Tu., Th., at 10 Tu., Th., at 1 Tu., Th., at 1 Tu., Th., at 2 Tu., Th., at 3	P. 10 P. 10 P. 7 P. 10 P. 10 P. 7 P. 10 P. 10	

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., M., 8 to 10	P. 11	
		Tu., 10 to 12	P. 11	
		W., 8 to 10	P. 11	
		F., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		Tu., 1 to 3	P. 11	
		W., 1 to 3	P. 11	
		F., 1 to 3	P. 11	
—139	3	Tu., Th., at 1; Th., 8 to 10	P. 6, 11	
141—144	2	Tu., Th., at 10	P. 9	Lockhart
145—146	2	Tu., 3 to 5	P. 6	Ruggles
147—148	2	Tu., Th., at 1	P. 13	Walradt
149—150	3	M., Th., F., at 11	P. 9	
150—149	3	M., W., F., at 1	Ph. 302	
154—153	3	M., Th., F., at 11	P. 10	Lockhart
157—158	2	Tu., Th., at 9	P. 13	Weidler
159—	3	M., W., F., at 2	P. 6	Huntington
160—162	3	M., W., F., at 1	P. 9	
163—	3	M., W., F., at 9	P. 7	Hammond
165—166	3	M., W., F., at 3	P. 7	Hammond
167—168	3	M., W., F., at 8	P. 6	Ruggles
169—170	2	Tu., Th., at 1	P. 9	
—171	3	Tu., Th., at 8	P. 10	
		Tu., Th., at 9	P. 7	
		Tu., Th., at 10	P. 10	
		Tu., Th., at 1	P. 10	
		Tu., Th., at 1	P. 7	
		Tu., Th., at 2	P. 10	
		Tu., Th., at 3	P. 10	
		Lab., M., 8 to 10	P. 11	
		Tu., 10 to 12	P. 11	
		W., 8 to 10	P. 11	
		F., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		Tu., 1 to 3	P. 11	
		W., 1 to 3	P. 11	
		F., 1 to 3	P. 11	
172—	3	M., W., F., at 2	O. 1	
—173	3	M., W., F., at 10	P. 11	Huntington
—174	3	M., W., F., at 2	O. 1	Sheppard
—175	3	M., W., F., at 3	Ph. 102	Coon
177—178	2	L., Tu., at 2	P. 12	Mark
		Lab., Th., 1 to 3	P. 11	
181—182	3	M., W., F., at 9	P. 6	Walradt
—183	3	M., W., F., at 9	P. 7	Hammond
—184	3	M., W., F., at 2	P. 6	Huntington
185—186	3	M., W., F., at 10	P. 7	Hagerty
—188	2	Tu., Th., at 8	P. 13	Ruggles

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
189—	2	Tu., Th., at 11	P. 6	de Haas
—190	2	Tu., Th., at 8	P. 9	Huntington
203—204	3	M., Th., F., at 11	L. 305	
207—208	2	Th., 4 to 6	L. 305	
209—210	1 to 3	To be arranged	P.	Hammond
211—212	1 to 3	To be arranged	P.	Ruggles
213—214	1 to 3	To be arranged	P.	Lockhart
215—216	2	To be arranged		Mark

SOCIOLOGY

101—102	3	M., W., F., at 8	P. 10	North
		M., W., F., at 9	L. 307	
		M., W., F., at 10	P. 6	
		M., Tu., F., at 11	P. 7	
		M., W., F., at 1	P. 7	Mark
		M., W., F., at 2	P. 10	McKenzie
		M., W., F., at 3	P. 10	Bice
102—101	3	M., W., F., at 3	P. 13	
—104	3	M., W., F., at 3	Ph. 204	Taft
105—	3	M., W., F., at 3	P. 9	Taft
107—	3	M., W., F., at 2	L. 107	McKenzie
—108	1	Tu., at 8	Arch M.	Mills
109—	4	M., W., F., at 8	P. 9	Hagerty
		Lab., S., 9 to 12		
111—	3	M., W., F., at 10	P. 9	Bice
—112	4	M., W., F., at 8	P. 9	Hagerty
		Lab., S., 9 to 12		
—114	3	M., W., F., at 9	P. 9	Bice
115—116	4	To be arranged	P.	Hagerty
117—118	2	Tu., 4 to 6	P. 7	Mark
119—	3	M., Th., F., at 11	P. 13	
123—124	3	M., W., F., at 3	P. 6	Thrasher
125—126	3	M., W., F., at 1	P. 10	McKenzie
127—128	3	M., W., F., at 10	P. 10	North
129—130	3	M., W., F., at 2	P. 7	North
131—132	3	M., W., F., at 9	P. 10	Hagerty
201—202	2	To be arranged	P.	McKenzie
207—208	2	Th., 4 to 6	P. 7	

ENGINEERING DRAWING

101—	2	M., W., 8 to 10	Br. 203	All Instruc-
		M., W., 1 to 3	Br. 203, 200	tors
		Tu., Th., 8 to 10	H. F.	
		Tu., Th., 1 to 3	Br. 203, 200	
		F., S., 8 to 10	Br. 104, H. F.	
—101	2	F., S., 8 to 10		

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
102—	3	M., at 8	Br. 200	
		M., 9 to 11; Tu., 8 to 10		
—102	3	L., M., at 2	Br. 203, 1	All Instructors
		M., at 9	Br. 203	
		W., at 10	Br. 203, 200	
		W., at 3	Br. 203	
		F., at 8	Br. 203, 200	
		F., at 10	Br. 200, 104	
		F., at 1	Br. 203, 200	
		F., at 2	Br. 104, 200, 1	
		F., at 3	Br. 203	
		Lab., M., W., 8 to 10	Br.	
		M., W., 1 to 3	Br.	
		Tu., Th., 8 to 10	Br.	
		Tu., Th., 1 to 3	Br.	
		F., S., 8 to 10	Br.	
103—	3	L., M., W., at 2	Br. 1, 12	All Instructors
		Tu., Th., at 8	Br. 203	
		Tu., Th., at 9	Br. 203, 200	
		Tu., Th., at 10	Br. 203	
		Tu., Th., at 3	Br. 203, 200	
		Lab., M., 1 to 3	Br.	
		W., 1 to 3	Br.	
		Th., 8 to 10	Br.	
		F., 10 to 12	Br.	
—104	3	L., M., at 10	Br. 104	Williams
		M., at 3	Br. 200	Williams
		Tu., at 8	Br. 203	Svensen
		Tu., at 3	Br. 203	Withrow, Batesole
		Lab., M., Tu., 8 to 10	H. F.	
		W., Th., 8 to 10	H. F.	
		Tu., W., 1 to 3	H. F.	
		F., 1 to 3; S., 8 to 10	H. F.	
105—	3	L., M., W., at 10	Br. 203	Turnbull
		M., W., at 2	Br. 203	Turnbull
		Lab., F., 10 to 12	Br.	
		F., 1 to 3	Br.	
—106	3	L., Tu., Th., at 8	Br. 12	Turnbull
		M., W., at 1	Br. 12	Turnbull
		Lab., Tu., 9 to 11	Br.	
		M., 2 to 4	Br.	
107—	3	L., Tu., Th., at 2	Br. 203	Meiklejohn
		Lab., Tu., 8 to 10	Br.	
		S., 8 to 10	Br.	
108—	3	Tu., Th., at 8; Th., 1 to 4	Br. 200	French
—110	2	M., Tu., 8 to 10	H. F.	Williams

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
111—	2	W., Th., 10 to 12	H. F.	Williams, Svensen
		M., Tu., 8 to 10	Br.	
113— —114	4	M., Tu., 1 to 3	Br.	Svensen
		Th., F., 1 to 3	Br.	
	3	Th., F., 1 to 4	Br. 203	Svensen
121—122	2	M., Tu., 1 to 3	Br. 12, 203	Withrow, Svensen
125—125	2	L., Tu., at 1	Br. 104	French
		Th., at 9	Br. 104	Meiklejohn
		Th., at 1	Br. 104	Withrow
		F., at 10	Br. 203	Batesole
		Lab., W., 8 to 11	Br.	
		W., 1 to 4	Br.	
		F., 8 to 11	Br.	
		F., 1 to 4	Br.	
127—	1½	S., 8 to 11	Br. 203	French, Turnbull
—128	1½	S., 8 to 11	Br. 203	French
129—	1	S., 8 to 10	Br.	
—130	2	S., 8 to 12	Br.	
131—132	3	M., W., 1 to 4	Br.	French
139—	4	Th., F., 1 to 4	Br.	Svensen
—140	3	Th., F., 1 to 4	Br.	Svensen

ENGLISH

101—104	2	Tu., Th., at 8	Ph. 202, 104, 204, 302	
		Tu., Th., at 9	Ph. 202, 104 102	
		Tu., Th., at 10	U. 312, P. 7, 12	
		Tu., Th., at 11	Ph. 202	
		Tu., Th., at 1	Ph. 202, 104, 204	
		Tu., Th., at 2	Ph. 102, 104, P. 9, P. 13	
		Tu., Th., at 3	Ph. 202, 104, 302, 204	
		Tu., Th., at 4	Ph. 104	
104—101	2	Tu., Th., at 8	Ph. 102	
		Tu., Th., at 1	Ph. 102	
		Tu., Th., at 4	Ph. 102	
		Tu., Th., at 10	Ph. 104	
105—106	2	Tu., Th., at 10	Ph. 104	Beck
107—108	2	Tu., Th., at 10	Ph. 202	Graves
127—128	2	Tu., Th., at 10	Ph. 204	McKnight
133—133	3	M., W., F., at 10	Ph. 104	Taylor

ENGLISH—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 3	Ph. 302	Graves
—136	3	M., W., F., at 1	Ph. 104	Percival
137—	3	M., W., F., at 1	Ph. 104	Percival
141—142	3	M., W., F., at 9	Ph. 102	Taylor
		M., W., F., at 10	Ph. 304	Cooper
		M., W., F., at 1	Ph. 102	Cooper
		M., W., F., at 3	Ph. 303	Percival
143—144	3	M., W., F., at 2	Ph. 102	Percival
145—146	3	M., W., F., at 8	Ph. 204	Percival
		M., W., F., at 10	Ph. 204	Beck
		M., W., F., at 1	Ph. 204	McKnight
		M., W., F., at 2	Ph. 302	Graves
154—153	3	M., W., F., at 3	L. 104	McKnight
155—156	3	M., W., F., at 2	Ph. 204	Taylor
157—158	3	M., W., F., at 9	Ph. 204	Graves
165—166	3	M., W., F., at 2	L. 104	McKnight
167—168	3	M., W., F., at 10	Ph. 102	Denney
169—170	3	M., W., F., at 9	Ph. 104	Cooper
181—	2	Tu., Th., at 10	Ph. 102	Denney
201—202	2	W., 4 to 6	L. 105	Graves
—204	2	To be arranged		Denney
205—206	2	M., 4 to 6	L. 104	Denney
207—208	2	Tu., 4 to 6	L. 104	Taylor
209—210	2	Tu., 4 to 6	L. 105	McKnight
213—214	2	Th., 4 to 6	L. 104	Cooper
215—216	2	Th., 4 to 6	Ph. 204	
217—218	2	Th., 4 to 6	L. 105	Percival
219—220	2	W., 4 to 6	L. 104	Denney

For Short Courses Only

91—92	2	Tu., Th., at 8	Ph. 5	Dishong
		Tu., Th., at 10	Ph. 5	Dishong
		Tu., Th., at 2	Ph. 5	Dishong
		Tu., Th., at 3	Ph. 5	Dishong

EUROPEAN HISTORY

101—102	3	M., W., F., at 8	U. 201	All Instruc- tors
		M., W., F., at 8	U. 316	
		M., W., F., at 9	U. 201	
		M., W., F., at 10	U. 201	
		M., W., F., at 1	U. 201	
		M., W., F., at 1	U. 202	
		M., W., F., at 2	U. 201	
		M., W., F., at 3	U. 201	
		M., W., F., at 4	U. 201	

EUROPEAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
103—104	3	M., W., F., at 8	U. 202	Perkins
		M., W., F., at 3	U. 202	Harris
105—106	3	M., W., F., at 9	U. 202	McNeal
107—108	2	Tu., Th., at 10	U. 201	McNeal
109—110	2	Tu., Th., at 11	L. 304	Siebert
113—114	3	M., W., F., at 10	U. 202	Siebert
117—118	2	Tu., Th., at 10	Li. 107	Siebert
121—122	2	Tu., Th., at 9	U. 202	McNeal
123—124	3	M., W., F., at 2	U. 202	Perkins
125—126	2	Tu., Th., at 1	L. 304	Harris
127—128	3	M., W., F., at 4	U. 202	
129—130	2	Tu., Th., at 3	U. 202	All Instruc- tors
—152	2	Tu., Th., at 9	L. 307	Siebert, Perkins
203—204	2 to 5	To be arranged		Siebert

FARM CROPS

101—	4	M., Th., F., at 11	H. F. 108
		Lab., Th., 1 to 3	H. F.
		F., 1 to 3	H. F.
—101	4	M., W., F., at 3	H. F. 108
		Lab., Th., 8 to 10	H. F.
		F., 8 to 10	H. F.

GEOLOGY

101—102	3	M., W., F., at 8	O. 1	Hills
		M., W., F., at 9	O. 1	Hills
		M., W., F., at 1	O. 105	Bownocker
		M., W., F., at 2	O. 105	Cottingham
103—	3	M., W., F., at 10	O. 105	Bownocker
—104	3	M., W., F., at 10	O. 105	Carman
105—	3 to 5	To be arranged; field trips Saturday		Carman
—106	3	To be arranged; field trips Saturday		Hills
107—108	2 to 5	To be arranged		Carman
111—	3	Tu., Th., 8 to 11 and 1 to 5	O.	Hills
113—114	2 to 5	To be arranged		Carman, Hills
116—	3	To be arranged		Hills
141—142	2 to 5	To be arranged		Bownocker, Carman, Hills
151—151 Agr.	3	L., Tu., Th., at 8	O. 105, 2nd sem. 1	Verwiebe

GEOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., at 9	O. 105	
		Tu., Th., at 10	O. 1, 2nd sem. 105	
		Tu., Th., at 1	O. 105, 2nd sem. 1	Verwiebe
		Tu., Th., at 2	O. 105	Verwiebe
		Tu., Th., at 3	O. 105	Cottingham
		Lab., W., 8 to 10	O.	Verwiebe
		W., 1 to 3	O.	Verwiebe
		F., 8 to 10	O.	Verwiebe
		F., 10 to 12	O.	Cottingham
		F., 1 to 3	O.	Verwiebe
—162	4	M., W., F., at 9	O. 105	
—164	3	M., W., F., at 10	O. 1	
165—	3	Tu., Th., at 10	O. 105	
		Lab., F., 10 to 12	O.	Verwiebe
—166	2	Tu., at 9; W., 2 to 4		Bownocker
167—	3	M., W., F., at 8	O. 105	Bownocker
168—	3	L., M., Th., at 11	O. 105	Carman
		Lab., Th., 2 to 4		
—168	3	L., Tu., Th., at 9	O. 1	Carman
		Lab., W., 1 to 3	O.	Carman
—170	3	M., W., F., at 8	O. 105	Bownocker
175—176	2	M., W., at 4	O. 1	Hills
201—202	3 to 5	To be arranged		Bownocker, Carman,
203—204	3 to 5	To be arranged		Carman

GERMAN

101—102	4	M., Tu., W., Th., at 10	U. 320	Evans
		M., Tu., W., Th., at 1	U. 320	Thomas
—101	4	M., Tu., W., Th., at 3	U. 320	Thomas
102—103	4	M., Tu., W., Th., at 8	U. 320	Eisenlohr
103—104	4	M., Tu., W., Th., at 9	U. 320	Busey
103—106	4	M., Tu., W., Th., at 10	U. 319	Eisenlohr
		M., Tu., W., Th., at 1	U. 319	Busey
		M., Tu., W., Th., at 4	U. 320	Thomas
104—	4	M., Tu., W., Th., at 3	U. 320	Thomas
107—108	4	M., Tu., W., Th., at 10	H. F. 107	Busey
117—118	2	Tu., Th., at 10	U. 406	Thomas
119—120	2	Tu., Th., at 9	U. 319	Evans
131—132	2	M., Th., at 11	U. 320	Eisenlohr
153—154	3	M., Th., F., at 11	U. 319	Evans
157—	2	Tu., Th., at 3	U. 319	Eisenlohr
—164	2	Tu., Th., at 3	U. 319	Eisenlohr
171—172	2	Tu., Th., at 2	U. 319	Eisenlohr

GERMAN—Continued

Course No.	Hours	Time	Room	Instructor
173—174	2	Tu., Th., at 4	U. 319	Evans
177—178	2	M., W., at 4	-	Busey
181—182	2	To be arranged		
203—204	2	To be arranged	L. 308	Thomas
215—216	2	W., 4 to 6	L. 308	Evans

GREEK LANGUAGE AND LITERATURE

101—102	4	M., Tu., W., Th., at 1	U. 306	Bolling
109—110	2	To be arranged		
111—112	2	To be arranged		
113—114	2	To be arranged		
115—116	2	Tu., Th., at 10	U. 306	Bolling
119—120	2	To be arranged		
121—122	2 to 4	To be arranged		
123—124	2	M., W., at 10	U. 306	Bolling
125—126	4	M., Tu., W., Th., at 2	U. 306	Bolling
129—130	3	To be arranged		Bolling
131—132	1	To be arranged		Bolling

HISTORY AND PHILOSOPHY OF EDUCATION

101—102	3	M., W., F., at 10	B. Z. 207	Anderson
		M., W., F., at 4	B. Z. 207	Anderson
103—104	2	Tu., Th., at 10	B. Z. 207	Anderson
105—106	2	Tu., Th., at 9	B. Z. 207	Anderson
107—108	2	M., W., at 3	B. Z. 207	Anderson
109—110	2	Tu., Th., at 3	B. Z. 207	Anderson
—112	2	Tu., Th., at 2	B. Z. 207	Anderson
201—202	2	Tu., 4 to 6	B. Z. 207	Anderson
203—204	2	To be arranged	B. Z. 207	Anderson
—206	1	M., at 9	B. Z. 207	Anderson

HOME ECONOMICS

101—102	5	L., M., W., at 9	H. E. 203	White
		M., W., at 2	H. E. 102	White
		Q., Th., at 10	H. E. 102	White
		F., at 8	H. E. 102	White
		F., at 10	H. E. 321	White
		F., at 1	H. E. 102	White
		Lab., (101-102) M., W.,	H. E.	
		1 to 3		
		(101-102) Tu., Th., 8 to 10		
		{ 1st sem. (101) M., W.,		
		9 to 11		
		{ 2nd sem. (102) Tu., F.,		
		10 to 12		

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
		{ 1st sem. (101) Tu., Th., 1 to 3 2nd sem. (102) Tu., Th., 3 to 5		
104—	3	M., W., F., at 10	H. E. 203	Linder
—104	3	M., W., F., at 10	H. E. 203	Linder
		M., W., F., at 2	H. E. 203	
105—106	2 to 5	W., at 10	H. E. 218	Van Meter
		Lab. to be arranged	H. E. 301, 302	
—108	2	Tu., Th., at 9	H. E. 102	Van Meter, Hathaway, Adams
110—	4	Tu., Th., at 8	H. E. 203	Skinner
		Lab., M., W., 1 to 3	H. E. 204	
—110	4	Tu., Th., at 8	H. E. 203	Skinner
		Tu., Th., at 1	H. E. 203	Skinner
		Lab., Tu., F., 10 to 12	H. E. 204	
		M., W., 1 to 3	H. E. 204	
111—112	2	L., M., at 9	H. E. 321	Walker
		M., at 2	H. E. 218, 321	Tucker
		Tu., at 8	H. E. 218	Walker
		Tu., at 2	H. E. 218	Walker
		Th., at 9	H. E. 218, 321	Walker
		Th., at 1	H. E. 218	Walker
		Lab., Tu., 9 to 11	H. E. 215, 216, 217	
		W., 8 to 10		
		W., 1 to 3		
		Th., 2 to 4		
		F., 8 to 10		
		F., 1 to 3		
113—	3	L., Th., at 10	H. E. 203	Hathaway
		Lab., Tu., F., 10 to 12	H. E. 113, 114	
		Tu., Th., 1 to 3		
		M., W., 1 to 3		
—113	3	L., Th., at 11	H. E. 102	Hathaway
		Tu., F., 10 to 12	H. E. 113, 114	
—116	3	L., Th., at 10	H. E. 203	Hathaway
		M., W., 1 to 3	H. E. 113	
		M., W., 8 to 10	H. E. 113, 114	
118—118	3	Th., at 10; Tu., 10 to 12; F., 1 to 3	H. E. 218, 211	Tucker
		F., at 9; Tu., Th., 3 to 5	H. E. 218	Tucker
119—	3	M., W., at 3; F., 2 to 4	H. E. 218	Walker
—119	3	M., W., at 9; F., 10 to 12	H. E. 218	Walker
		M., W., at 3; F., 2 to 4	H. E. 218	Walker
121—	3	M., at 10	H. E. 218	Linder, Skinner

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., Tu., Th., 8 to 10	H. E. 302	
		M., W., 2 to 4	H. E. 302	
123—124	2	Tu., at 11; Lab., to be arranged	H. E. 203	Adams
125—126	3	To be arranged		White
201—202	2 to 5	To be arranged		White

HORTICULTURE

101—	4	M., W., F., at 10 Lab., Tu., 1 to 3 Th., 1 to 3	H. F. 113	
—120	4	M., W., F., at 10 Lab., Tu., 1 to 3 Th., 1 to 3	H. F. 113	
—156	2	M., W., at 8	H. E. 203	Allen
—184	3	M., W., F., at 8	H. F.	Scherer

JOURNALISM

101—102	3	M., W., at 9 M., W., at 1 Agr. Tu., at 11 Lab. to be arranged	S. 208 S. 208 S. 208	Myers Myers Baker
102—101	3	Tu., Th., at 9	S. 208	Myers
105—106	3	Tu., Th., at 11; Lab. to be arranged	S. 208	Myers
109—110	2	Tu., at 10; lab., to be arranged	S. 208	Myers
111—112	3	M., W., F., at 8	S. 208	Hooper
113—	2	Tu., Th., at 8	S. 208	Myers
—114	2	Tu., Th., at 8	S. 208	Hooper
115—116	2	Tu., Th., at 9	S. 208	Hooper
117—	3	M., W., F., at 10	S. 208	Hooper
—118	3	M., W., F., at 10	S. 208	Myers

LATIN

101—102	4	M., Tu., W., Th., at 9 M., Tu., W., Th., at 10 M., Tu., W., Th., at 3	U. 306 U. 316 U. 316	Elden
103—104	3	M., W., F., at 10 M., W., F., at 2	U. 412 U. 316	Hodgman Elden
105—106	2	Tu., Th., at 9	U. 316	Elden
107—108	1	M., at 4	U. 316	Derby
109—110	1 or 2	Tu., Th., at 2	U. 316	Derby
111—112	1	M., at 3	U. 306	Elden
113—114	3	M., W., F., at 9	U. 316	Elden

LATIN—Continued

Course No.	Hours	Time	Room	Instructor
115—116	3	M., Th., F., at 11	U. 316	Hodgman
119—120	1 or 2	Tu., at 3	U. 312	Hodgman
121—122	2 to 5	Tu., Th., at 8	L. 311	Derby, Hodgman, Elden
123—124	1	Th., at 3	U. 312	Hodgman
125—126	1	W., at 3	U. 306	Elden
129—130	2	Tu., Th., at 10	U. 209	Hodgman
131—132	1 or 2	To be arranged		
147—148	4	M., Tu., W., Th., at 10	H. F. 203	
149—150	4	M., Tu., W., Th., at 2	H. F. 107	
201—202	1	Tu., at 4	U. 307	Hodgman
203—204	1	F., at 3	U. 316	Elden
213—214	2 or 3	M., W., F., at 9	L. 311	Derby

MANUAL TRAINING

111—112	3	M., Th., F., at 11	S.	Usry
117—118	2	L., Th., at 10	S.	Usry
		Lab., Th., 8 to 10	S.	Usry
121—122	2	L., M., at 4	S.	Usry
		W., at 1	S.	Usry
		Lab., M., 2 to 4	S.	Usry
		Tu., 9 to 11	S.	Usry
		W., 2 to 4	S.	Usry
123—123	2	M., W., at 10	S.	Usry
—125	2	W., 1 to 4; S., 8 to 11	S.	Usry, Smith
127—128	3	M., Tu., 1 to 4	S.	Usry, Smith
129—129	2	M., W., F., 9 to 11	S.	Usry, Smith
		Th., F., 1 to 4	S.	Usry, Smith
131—	3	W., 1 to 4; S., 8 to 11	S.	Usry, Smith

MATHEMATICS

101—102	5	To be arranged		
107—107	3	M., W., F., at 8	U. 310	Rickard
		M., W., F., at 9	U. 310	Rasor
		M., W., F., at 10	U. 312	Bohannon
		M., W., F., at 1	U. 310	Bareis
		M., W., F., at 2	U. 310	Rasor
		M., W., F., at 3	U. 312	Arnold
113—114	5	To be arranged		
121—122	3	M., W., F., at 8	U. 306	West
		M., W., F., at 9	U. 308	Swartzel

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 1	U. 316	Arnold
		M., W., F., at 2	U. 320	Weaver
125—126	2	Tu., Th., at 3	L. 306	Arnold
127—128	3	M., W., F., at 1	U. 311	Kuhn
129—130	3	M., W., F., at 9	U. 313	West
		M., W., F., at 1	U. 313	West
131—132	5	Daily at 8	U. 309	Rasor
		Daily at 8	U. 312	Bohannon
		Daily at 9	U. 309	McCoard
		Daily at 9	U. 311	Kuhn
		Daily at 10	U. 308	Swartzel
		Daily at 10	U. 310	Morris
		Daily at 1	U. 309	Preston
		Daily at 1	U. 308	Rickard
		Daily at 1	U. 312	Weaver
		Daily at 2	U. 312	Preston
		Daily at 2	H. F. 205	Morris
		Daily at 3	U. 309	McCoard
		Daily at 3	U. 311	Bareis
132—131	5	Daily at 10	U. 309	Preston
		Daily at 3	Lo. 232	
135—	3	M., W., F., at 2	U. 313	West
141—142	5	Daily at 8	Lo. 232	Boyd
		Daily at 8	U. 311	Kuhn
		Daily at 9	U. 312	Bohannon
		Daily at 10	U. 311	Arnold
		Daily at 10	U. 313	Rasor
		Daily at 1	H. F. 205	Bareis
		Daily at 2	U. 308	Rickard
		Daily at 2	U. 309	McCoard
		Daily at 3	U. 310	Weaver
		Daily at 3	H. F. 205	Morris
142—141	5	Daily at 10	H. F. 205	Bareis
		Daily at 3	U. 308	Rickard
149—150	3	To be arranged		Weaver
151—	1	Tu., at 11	U. 312	Bohannon
165—166	3	M., Th., F., at 11	U. 310	Morris
167—168	3	M., Th., F., at 11	U. 312	Bohannon
171—172	3	M., W., F., at 2	U. 311	Bareis
173—174	3	M., W., F., at 10	L. 306	Kuhn
—181	3	M., W., F., at 3	U. 313	West
183—184	2	M., F., at 11	U. 313	West
185—186	2	Tu., Th., at 2	U. 310	Arnold
187—	3	M., W., F., at 3	U. 313	West
—190	2	M., W., at 2	U. 313	West
201—202	3	M., W., F., at 1	L. 306	Rasor
203—204	3	M., Th., F., at 11	U. 311	Swartzel

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
205—206	3	To be arranged		Bohannan
207—	3	To be arranged		Arnold
209—210		To be arranged		West
211—212		To be arranged		Kuhn
213—214		To be arranged		Rasor
215—216		To be arranged		
217—218		To be arranged		Swartzel
219—220		To be arranged		
221—222		To be arranged		Kuhn

MECHANICS

101—102	5	Daily at 8	U. 308	Boyd
		Daily at 9	Lo. 232	Boyd
		Daily at 10	Lo. 232	Boyd
		Daily at 1	Lo. 232	Coddington
		Daily at 2	Lo. 232	Coddington
103—	5	Daily at 11	Lo. 232	Boyd
—104	2	Tu., Th., at 8	Lo. 107	Boyd
		M., W., at 2	Lo. 107	Boyd
201—202	3	To be arranged		Boyd, Coddington

MILITARY SCIENCE AND TACTICS

1—1	1	M., W., Th., F., at 11	Ha.	Converse, Small
		Tu., W., Th., at 4; Th., at 11		
2—2	1	M., W., F., at 11	Ha.	Converse, Small
		Tu., W., Th., at 4		

MINERALOGY

102—	3	M., W., F., at 8	Lo. 107	McCaughy
—102	3	M., W., F., at 8	Lo. 107	McCaughy
		M., W., F., at 9	Lo. 107	McCaughy
—104	3	Th., F., 1 to 4	Lo. 107	McCaughy
105—	2	To be arranged	Lo.	McCaughy
117—118	3	To be arranged	Lo.	McCaughy
121—	3 to 5	To be arranged	Lo.	McCaughy
123—124	5	To be arranged	Lo.	McCaughy
—126	3	To be arranged	Lo.	McCaughy

PHILOSOPHY

101—102	3	M., W., F., at 9	U. 321	Leighton, Williams
		M., W., F., at 9	U. 319	Avey

PHILOSOPHY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 10	Li. 307	Leighton, Williams
102—101	3	M., W., F., at 8	U. 321	Avey
		M., W., F., at 2	L. 307	Avey
105—106	3	M., W., F., at 8	U. 319	Williams
105—	3	M., W., F., at 1	L. 307	Williams
107—108	3	M., W., F., at 10	U. 321	Avey
		M., W., F., at 2	U. 321	Williams
111—	3	M., W., F., at 3	U. 321	Williams
113—114	2	Tu., Th., at 9	U. 321	Avey
115—116	2	Tu., Th., at 10	U. 321	Avey
121—122	3	M., W., F., at 2	U. 319	Leighton
—132	3	To be arranged	L. 307	Williams
—134	3	M., W., F., at 1	U. 321	Leighton
138—139	3	M., W., F., at 4	U. 321	Williams
—144	2	M., F., at 11	U. 321	Leighton
146—	3	M., W., F., at 1	U. 321	Leighton
147—148	2	Tu., Th., at 2	U. 321	Avey
—150	2	Tu., Th., at 1	U. 321	Williams
161—162	3	To be arranged	L. 307	Avey
201—202	3 to 6	To be arranged		
207—208	3 to 6	To be arranged		
209—210	2	To be arranged		

PHYSICAL EDUCATION

For Men

101—102	1	Tu., Th., at 10	Bird
		M., W., at 10	
		M., F., at 10	
		W., F., at 10	
		Tu., Th., at 11	
		Tu., Th., at 2	
		M., W., at 2	Ohlson
		M., F., at 2	Ohlson
		W., F., at 2	Ohlson
		Tu., Th., at 3	Ohlson
		M., W., at 3	Bird
		M., F., at 3	Bird
		W., F., at 3	Bird
		Tu., Th., at 4	Bird
		M., W., at 4	Ohlson
		M., F., at 4	Ohlson
		W., F., at 4	Ohlson
		(Hours to be arranged for corrective work.)	

PHYSICAL EDUCATION—Continued

Course No.	Hours	Time	Room	Instructor
107—	2	Tu., Th., at 3	Ath. House	St. John, Wilce, Castleman
—110	2	M., Th., at 11	Ath. House	Wilce
—112	2	Tu., Th., at 4	P. 109	St. John Wilce, Castleman
—120	2	Tu., F., at 11		Castleman
—122	2	L., M., at 4 Lab., Tu., Th., at 5		Bird
125—	2	Tu., F., at 11		
For Women				
131—132	1	Tu., at 11; 3 hours to be arranged		Breyfogle, Meyer, Hammett
133—134	1	4 hours to be arranged		Meyer, Hammett
135—136	3	Tu., Th., 9 and 3		Meyer, Hammett

PHYSICS

101—	6	Short courses in Engr., to be arranged	Ph.	Heil
103—104	4	M., W., F., at 8	Ph. 205	Earhart
		M., W., F., at 3	Ph. 205	Earhart
		Lab., W., 9 to 11	Ph.	
		W., 1 to 3		
105—106	4	Tu., Th., at 10	Ph. 301, 205	Blake
		Tu., Th., at 3	Ph. 205	Blake
		Lab., Tu., Th., 8 to 10		
		Tu., Th., 1 to 3		
109—109	3 Agr.	M., W., F., at 8	Ph. 202	Cole
		M., W., F., at 9	Ph. 202	Cole
		M., W., F., at 10	Ph. 202	Cole
		M., W., F., at 1	Ph. 202	Cole
		M., W., F., at 2	Ph. 202	Cole
		M., W., F., at 3	Ph. 202	Cole
111—112	3 Cer.	Tu., Th., at 9; S., 8 to 10 (1st Sem.)	Ph. 205	
		M., 2 to 4 (2nd Sem.)		
	Civil	Tu., Th., at 10; W., 2 to 4 (1st Sem. only)	Ph. 205, 307	
		Tu., Th., at 2; F., 10 to 12 (1st Sem. only)	Ph. 202	
	Chem.	M., W., at 1; F., 8 to 10	Ph. 205, 307	

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		Th., 10 to 12 (1st Sem.)		
		Tu., 8 to 10		
		Tu., 10 to 12 (2nd Sem.)		
	Mine	Tu., Th., at 10; S., 8 to 10 (1st Sem.)	Ph.	
		M, 10 to 12 (2nd Sem.)		
	Arch. Engr.	M., W., at 1; Tu., 10 to 12	Ph. 307, 205	
—111	3	To be arranged	Ph.	Cole
113—	5 Mech.	L., M., W., at 8	Ph. 307	All Instruc- tors
		Prob., Tu., Th., at 8	Ph. 307	
		Lab., Th., 2 to 4		
		L., M., W., at 1	Ph. 301	
		Prob., Tu., Th., at 1	Ph. 205, 307	
		Lab., F., 10 to 12		
	Elec.	L., M., W., F., at 9	Ph. 205, 307	
		Prob., Tu., Th., at 9	Ph. 307	
		L., M., W., F., at 2	Ph. 307, 205, 307	
		Prob., Tu., Th., at 2	Ph. 205, 307	
	Gen.	L., M., W., at 1	Ph. 301	
		Prob., Tu., Th., at 1	Ph. 205, 307	
		Lab., F., 8 to 10		
—114	4 Elec.	L., M., W., at 9	Ph. 205, 307	
		Prob., Tu., Th., at 9	Ph. 307	
	Gen.	L., M., W., at 1	Ph. 301	
		Prob., Tu., Th., at 1	Ph. 205, 307	
	Elec.	L., M., W., at 2	Ph. 307, 205	
		Prob., Tu., Th., at 2	Ph. 205, 307	
115—116	2	To be arranged	Ph.	Earhart, Smith, Heil
117—118	2 Arch.	Tu., Th., at 1	Ph. 301	All Instruc- tors
—119	3 Mech.	M., W., F., at 9	Ph. 307, 205	
		M., W., F., at 2	Ph. 301, 307, 205	
—120	2	To be arranged	Ph.	Cole
121—122	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
123—124	3 to 5	M., Tu., 1 to 4	Ph. 100	Smith
—125	5 Civil	L., M., W., at 10	Ph. 205	
		Prob., Tu., Th., at 10	Ph. 307, 301	
		Lab., Tu., 2 to 4		
		L., Tu., Th., at 2	Ph. 301	
		Prob., M., W., at 2	Ph. 205, 301	
		Lab., W., 8 to 10		
133—	2 Elec.	M., Tu., 8 to 10	Ph. 100	Earhart, Heil

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		W., Th., 8 to 10	Ph. 100	Earhart, Heil
		M., Tu., 2 to 4	Ph. 100	Earhart, Heil
—134	4 Elec.	F., at 10; M., Tu., 1 to 4	Ph. 301	Barnett
		M., at 3; F., S., 8 to 11	Ph. 301	Barnett
		M., at 3; W., Th., 8 to 11	Ph. 301	Barnett
135—	5 Elec.	Tu., Th., at 1	Ph. 307, 205	Barnett
		Tu., Th., at 3	Ph. 301	Barnett
		Lab., W., Th., 8 to 11		
		F., S., 8 to 11		
—136	4	To be arranged	Ph.	
137—	3 to 5	To be arranged	Ph.	
—138	2 Mech.	W., Th., 2 to 4	Ph.	Smith, Heil
		F., S., 8 to 10	Ph.	Smith, Heil
139—140	3 to 5	To be arranged	Ph.	Barnett
145—146	1	Tu., at 11	Ph. 205	Cole
147—148	3	To be arranged		
169—170	2	To be arranged		Cole
201—202	3 to 5	To be arranged	Ph.	
207—208	3	To be arranged	Ph.	Smith
215—216	3	To be arranged	Ph.	Barnett

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY
AND PHARMACOLOGY

101—102	3	M., W., F., at 8	Bio. 200	
		M., W., F., at 9	Bio. 100	
		M., W., F., at 10	Bio. 200	
		M., W., F., at 1	Bio. 200	
		M., W., F., at 2	Bio. 200	
		M., W., F., at 3	Bio. 200	
—104	3	Tu., Th., 8 to 11	Bio. 208	Bleile
—106	5	Tu., Th., F., 1 to 4	Bio. 201-8	Bleile, Seymour, Durrant
107—	3	M., W., F., at 9	Bio. 101	Durrant
109—110	3	To be arranged	Bio.	Bleile, Seymour, Durrant
111—112	5	To be arranged	Bio.	Bleile, Seymour, Durrant
114—	3	Tu., 1; Th., at 11	Bio. 100	
		Lab., Tu., 2 to 5		

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
115—	3	M., Tu., F., at 11	Bio. 200	Bleile
—118	3	M., Tu., F., at 11	Bio. 200	Durrant
119—120	3	M., W., F., at 2	Bio. 100	Bleile
121—122	5	To be arranged	Bio.	Brooks
123—	4	To be arranged	Bio.	Brooks, Seymour
—130	4	To be arranged	Bio.	McPeck
—132	3	M., W., F., at 1	Bio. 101	Bleile
For Pre-Medics				
135—136	4	L., Tu., Th., at 9	Bio.	Bleile, Durrant
Lab., Tu., Th., 1 to 3				
201—202	3	To be arranged	Bio.	Bleile
203—204	5 to 10	To be arranged	Bio.	

POLITICAL SCIENCE

102—	3	M., W., F., at 4	U. 200	
106—	3	M., W., F., at 10	L. 303	Cottrell
109—110	3	M., W., F., at 9	L. 303	Cottrell
113—114	2	Tu., Th., at 3	U. 200	
115—116	2	Tu., Th., at 10	U. 200	Coker
117—118	2	Tu., 4 to 6	L. 307	Coker
125—126	3	M., W., F., at 8	L. 107	
—130	3	M., W., F., at 10	U. 200	Cottrell
131—132	2	Tu., Th., at 9	U. 200	Coker
133—134	3	M., W., F., at 8	U. 200	
		M., W., F., at 9	U. 200	
		M., W., F., at 2	U. 200	
		M., W., F., at 3	U. 200	
—133	3	M., W., F., at 3	L. 307	Coker
151—152	2	To be arranged		Cottrell
201—202	2	To be arranged		Coker, Cottrell

PRINCIPLES AND PRACTICE OF EDUCATION

101—	3	M., W., F., at 10	B. Z. 209
		M., W., F., at 2	B. Z. 207
—101	3	M., W., F., at 2	B. Z. 207
104—104	3	Two consecutive hours daily; to be arranged	
105—106	3	Tu., Th., 4 to 5:30	B. Z. 209
111—112	3	To be arranged	

PSYCHOLOGY

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 8	U. 400	All Instruc- tors
		M., W., F., at 8	U. 401	
		M., W., F., at 9	U. 401	
		M., W., F., at 9	U. 400	
		M., W., F., at 9	U. 412	
		M., W., F., at 10	U. 400	
		M., W., F., at 10	U. 401	
		M., W., F., at 10	U. 406	
		M., W., F., at 1	U. 400	
		M., W., F., at 1	U. 406	
		M., W., F., at 2	U. 400	
		M., W., F., at 2	U. 401	
		M., W., F., at 3	U. 400	
		M., W., F., at 4	U. 400	
102—101	3	M., W., F., at 3	U. 401	
		M., W., F., at 3	U. 406	
103—104	3	Tu., Th., at 9	U. 412	Weiss
		Lab., W., 1 to 3		
107—108	2	M., F., at 11	U. 400	Pintner
		M., F., at 11	U. 401	Coy
		Tu., Th., at 9	U. 400	Evans
		Tu., Th., at 10	U. 400	Goudge
		Tu., Th., at 4	U. 400	Coy
108—107	2	Tu., Th., at 3	U. 406	Coy
111—112	3	Tu., at 1	U. 415	Weiss
		Lab., Tu., 2 to 4		
		Th., 1 to 3		
—114	2	Tu., Th., at 10	U. 412	Weiss
115—116	2	Tu., Th., at 10	U. 401	Evans
121—122	4	M., W., F., at 9 ; S., 9 to 11	U. 406	Pintner, Crane
—124	2	Tu., Th., at 9	U. 406	Goudge
125—126	3	M., W., F., at 10	U. 415	Evans
—127	2	M., F., at 11	U. 406	Crane
128—	2	M., F., at 11	U. 406	Crane
129—130	2	M., F., at 1	U. 412	Culler
133—134	3	M., W., F., 1 to 3	U. 405	Pintner
137—138	2	Th., 4 to 6	L. 309	Weiss
141—142	2 to 4	To be arranged		
147—148	1 or 2	M., W., F., 3 to 5	U.	Pintner, Evans
149—150	2	Tu., Th., at 11	U. 406	Goudge
151—152	2	Tu., Th., at 2	U. 406	Crane
153—	2	W., 3 to 5	U. 415	Weiss
155—	2	M., at 11	U. 412	Evans
		Lab., to be arranged		

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
201—202	3 or more	To be arranged		Pintner, Weiss, Bridges
203—204	2	M., 7 to 9 P. M.	L. 309	Pintner, Weiss
205—206	1	To be arranged		

PUBLIC HEALTH AND SANITATION**Public Health**

101—	2	To be arranged		
113—	2	Tu., Th., at 11		Hayhurst
121—122	2	Tu., Th., at 10	Bio. 101	Hayhurst
201—	2	Tu., Th., at 9		Hayhurst
—202	3	M., W., F., at 10		Hayhurst
—204	2	Tu., Th., at 8		
205—	2	Tu., Th., at 8		
207—208	2	Tu., Th., at 10		Paterson
209—210	3	M., W., F., at 9		
211—	4	M., Tu., Th., F., at 11		Van Buskirk
—212	4	M., Tu., Th., at 11; F., 1 to 4		Van Buskirk
213—214	3	Th., at 1; Tu., Th., 2 to 5		Van Buskirk
—216	1	M., 3 to 5		

PUBLIC SPEAKING

101—102	2	Tu., Th., at 8	Ph. 304	Ketcham
		Tu., Th., at 8	Li. 307	Eich
		Tu., Th., at 10	Ph. 303	Ketcham
		Tu., Th., at 10	Ph. 304	Eich
		M., W., at 1	Ph. 304	Eich
		Tu., Th., at 1	Ph. 304	Ketcham
		Tu., Th., at 1	Ph. 303	Eich
		Tu., Th., at 2	Ph. 303	Eich
101—		M., W., at 3	Ph. 204	Eich
107—108	3	M., at 3; W., 3 to 5	Ph. 304	Ketcham
—110	2	To be arranged		Ketcham
—114	2	M., F., at 11	Ph. 303	Eich
125—126	2	Tu., Th., at 9	Ph. 304	Ketcham
151—152	2	Tu., Th., at 2	Ph. 304	Ketcham

ROMANCE LANGUAGES**French**

101—102	4	M., Tu., W., Th., at 8	U. 303	All Instruc-
		M., Tu., W., Th., at 8	H. F. 203	tors
		M., Tu., W., Th., at 9	H. F. 203	

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
		M., Tu., W., Th., at 9	Ph. 302	
		M., Tu., W., Th., at 10	U. 303	
		M., Tu., W., Th., at 10	U. 302	
		M., Tu., W., Th., at 1	U. 303	
		M., Tu., W., Th., at 1	U. 302	
		M., Tu., W., Th., at 2	Br. 200	
		M., Tu., W., Th., at 2	H. F. 203	
		M., Tu., W., Th., at 3	U. 302	
		M., Tu., W., Th., at 3	H. F. 203	
		M., Tu., W., Th., at 4	U. 301	
		M., Tu., W., Th., at 4	U. 308	
—101	4	M., Tu., W., Th., at 3	H. E. 203	
102—103	4	M., Tu., W., Th., at 3	U. 301	
103—104	4	M., Tu., W., Th., at 8	U. 302	All Instructors
		M., Tu., W., Th., at 9	U. 302	
		M., Tu., W., Th., at 10	H. F. 108	
		M., Tu., W., Th., at 1	H. F. 203	
		M., Tu., W., Th., at 2	U. 303	
		M., Tu., W., Th., at 4	U. 302	
104—	4	M., Tu., W., Th., at 3	H. E. 203	
—106	4	M., Tu., W., Th., at 10	Br. 1	Chapin
107—	2	Tu., Th., at 9	U. 209	Cardon
		Tu., Th., at 2	U. 209	Cardon,
				Bowen
—108	2	Tu., Th., at 9	U. 209	Cardon,
				Riley
109—110	3	M., W., F., at 9	U. 301	Cardon
		M., Th., F., at 11	U. 301	Bowen
111—112	2	Tu., Th., at 10	U. 202	
115—116	2	Tu., Th., at 4	U. 321	
119—120	2	Tu., 3 to 5	L. 311	Bowen
—122	2	W., 2 to 4	L. 311	Bowen
Italian				
101—102	4	M., Tu., W., Th., at 10	H. E. 321	Guigou
103—104	2	Tu., Th., at 2	U. 201	
Spanish				
101—102	4	M., Tu., W., Th., at 8	U. 301	All Instructors
		M., Tu., W., Th., at 8	Ph. 303	
		M., Tu., W., Th., at 9	U. 303	
		M., Tu., W., Th., at 9	Ph. 303	
		M., Tu., W., Th., at 10	Ph. 302	
		M., Tu., W., Th., at 10	H. F. 106	
		M., Tu., W., Th., at 1	U. 301	
		M., Tu., W., Th., at 2	U. 301	
		M., Tu., W., Th., at 2	Br. 104	
		M., Tu., W., Th., at 3	U. 303	

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
		M., Tu., W., Th., at 4	U. 303	
101—	4	M., Tu., W., Th., at 1	Li. 107	
—101	4	M., Tu., W., Th., at 1	Li. 107	Hamilton
103—104	4	M., Tu., W., Th., at 10	U. 301	Chapin
		M., Tu., W., Th., at 4	Ph. 303	Gutierrez
193—110	4	M., Tu., W., Th., at 8	H. F. 108	Chapin
		M., Tu., W., Th., at 2	U. 302	Chapin
105—106	2	Tu., Th., at 11	U. 303	Ingraham
107—108	2	Tu., Th., at 9	U. 301	Ingraham
111—	2	To be arranged		Ingraham
—112	3	M., Th., F., at 11	U. 302	Gutierrez

GRADUATE COURSES

Romance Languages

201—202	2	To be arranged		Bowen
203—204	1	To be arranged		Bowen
205—206	2	To be arranged		
207—208	3 to 10	To be arranged		Bowen
209—210	3 to 5	To be arranged		Ingraham
211—212	2	To be arranged		Ingraham
213—	2	To be arranged		Hamilton
215—216	2	To be arranged		
217—218	2	M., 3 to 5	L. 311	Bowen

RURAL ECONOMICS

101—101	2	Tu., at 10; W., 1 to 4	T. 106	Phillips
		M., at 11; W., 8 to 11	T. 106	
—110	3	M., W., F., at 9	T. 124	Lantis
201—202	3 to 10	M., at 4	T. 124	

SCHOOL ADMINISTRATION

101—	3	M., W., F., at 9	B. Z. 209	Brown
—101	3	M., W., F., at 9	B. Z. 209	McCracken
101—102	3	M., W., F., at 4	B. Z. 209	McCracken,
				Brown
103—	2	Tu., Th., at 2	B. Z. 209	McCracken
—104	2	Tu., Th., at 9	B. Z. 209	McCracken
105—105	2	S., 10 to 12	B. Z. 209	McCracken,
				Brown
111—112	3	M., W., F., at 3	B. Z. 209	Brown
113—114	3	M., W., F., at 2	B. Z. 209	McCracken
115—	2	Tu., Th., at 3	B. Z. 209	Brown
—116	3	M., W., F., at 9	B. Z. 111	Brown
117—118	2	S., 10 to 12	B. Z. 207	Brown,
				McCracken

SCHOOL ADMINISTRATION—Continued

Course No.	Hours	Time	Room	Instructor
—122	2	To be arranged		
123—124	3	To be arranged		
127—	2	To be arranged		
132—	2	To be arranged		
133—134	3	M., Th., F., at 11	B. Z. 209	Brown
201—202	2 to 5	To be arranged	B. Z.	Brown, McCracken

SHOPWORK

101—101	2	Tu., at 8; Tu., 1 to 4	S.	Beem,
		Tu., at 10; F., 1 to 4	S.	Denman,
		Tu., at 1; Tu., 8 to 11	S.	Smith,
		Tu., at 1; F., 8 to 11	S.	Senn
		Tu., at 10; M., 1 to 4	S.	
		Th., at 1; Th., 8 to 11	S.	
		Th., at 3; M., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
103—103	2	Tu., at 8; Tu., 1 to 4	S.	Foust,
		Tu., at 10; F., 1 to 4	S.	Wright
		Tu., at 10; M., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Tu., at 3; M., 8 to 11	S.	
		Th., at 2; Th., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
105—	2	M., at 9; Tu., 1 to 5	S.	Beem
		Th., at 2; S., 8 to 10	S.	
—105	2	M., 1 to 4; Tu., 1 to 3	S.	Beem
107—	2	M., 8 to 10; Tu., 8 to 11	S.	Case
		W., 1 to 3; S., 8 to 11	S.	Case
—107	2	W., 1 to 4; S., 8 to 10	S.	Case
109—	2	M., 1 to 3; Tu., 1 to 4	S.	Beem
		F., 8 to 10; S., 8 to 11	S.	Beem
—109	2	F., 8 to 10; S., 8 to 11	S.	Beem
111—	1	W., 8 to 11	S.	Beem
		F., 1 to 4	S.	Beem
—111	1	Tu., 9 to 12	S.	Beem
115—	2	M., 8 to 10; Tu., 8 to 11	S.	Foust,
		Tu., 1 to 4; W., 1 to 3	S.	Wright
				Foust,
				Wright
—115	2	W., 1 to 4; S., 8 to 10	S.	Foust,
				Wright
—118	2	To be arranged	S.	Foust,
				Wright
119—	3	M., Tu., 8 to 11	S.	Knight,
				Case

SHOPWORK—Continued

Course No.	Hours	Time	Room	Instructor
		W., Th., 8 to 11	S.	Knight, Case
		F., 1 to 4; S., 8 to 11	S.	Knight, Case
—119	3	W., Th., 8 to 11	S.	Knight, Case
		M., Tu., 1 to 4	S.	Knight, Case
121—	3	M., Tu., 1 to 4	S.	Knight, Case
		W., Th., 1 to 4	S.	Knight, Case
—121	3	M., Tu., 8 to 11	S.	Knight, Case
		W., Th., 1 to 4	S.	Knight, Case
		F., S., 8 to 11	S.	Knight, Case
123—	2	To be arranged	S.	Knight, Case
125—125	2	To be arranged	S.	Knight, Case
127—127	3	To be arranged	S.	Knight, Case
201—202	5 to 10	To be arranged	S.	Sanborn, Knight

For Short Courses Only

51—51	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.
52—52	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.

ZOOLOGY AND ENTOMOLOGY**Zoology**

101—102	3	L., M., W., at 8	B. Z. 67	All Instruc- tors
		M., W., at 9	B. Z. 67	
		M., W., at 1	B. Z. 67	
		M., W., at 2	B. Z. 67	
		M., W., at 3	B. Z. 67	
		Lab., M., 1 to 3	B. Z. 65, 69	
		Tu., 8 to 10	B. Z. 65, 69	
		Tu., 1 to 3	B. Z. 65, 69	

ZOOLOGY AND ENTOMOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Th., 8 to 10	B. Z. 65, 69	
		Th., 1 to 3	B. Z. 65, 69	
		F., 8 to 10	B. Z. 65, 69	
		F., 1 to 3	B. Z. 65, 69	
		Pre-Medics and Dentistry		
		M., W., at 10	B. Z. 67	
		M., 8 to 10	B. Z. 65, 69	
—101	3	Tu., Th., at 3; S., 8 to 10	B. Z. 67, 65	
115—115	3	M., W., F., at 10	B. Z. 211	Barrows
121—122	3	L., Tu., at 1	B. Z. 111	Kostir
		Lab., Tu., 2 to 4; Th., 1 to 3		
123—	2	To be arranged	B. Z.	Kostir
—124	2	To be arranged	B. Z.	Osburn
				Krecker
129—	2 to 5	M., Th., at 11	B. Z. 67	Barrows
—130	2 to 5	M., Th., at 11	B. Z. 67	Barrows
131—132	3	M., Th., F., at 11	B. Z. 109	Osburn
139—140	2	M., at 10; Tu., 1 to 4	B. Z.	Hine
141—142	3 to 5	To be arranged	B. Z.	
145—	3	To be arranged	B. Z.	Barrows
153—154	2 to 5	Tu., Th., at 9	B. Z. 67	Barrows
157—158	3	M., F., 10; W., 1 to 4	B. Z. 111	Krecker
159—160	3 to 5	L., Tu., Th., at 8	B. Z. 209	Krecker
		Lab. to be arranged		
201—202	1	To be arranged	B. Z.	Osburn
223—224	3 to 5	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	
247—248	5	To be arranged	B. Z.	Osburn

Entomology

107—108	3	L., Tu., Th., at 8	B. Z. 100	Metcalf
		Tu., Th., at 1	B. Z. 67	Metcalf
		Lab., W., 8 to 10	B. Z. 65, 69	Metcalf
		W., 1 to 3	B. Z. 65, 69	Metcalf
—112	3	Tu., Th., at 8	B. Z. 211	Hine
		Lab., Th., 1 to 4	B. Z.	
		S., 8 to 11	B. Z.	
113—114	4	Tu., Th., at 10	B. Z. 109	Metcalf
		Lab., M., W., F., 1 to 4	B. Z. 107	
137—138	3 to 5	Tu., Th., at 10	B. Z. 109	Metcalf
		Lab., M., W., F., 1 to 4		
141—142	3 to 5	To be arranged	B. Z.	
147—	2	Tu., Th., at 10	B. Z. 211	Hine
—148	2	Tu., Th., at 9	B. Z. 109	Osburn
149—150	3 to 5	M., F., at 11	B. Z. 211	Metcalf
		Lab., F., 8 to 11		
151—152	3	Tu., at 11	B. Z. 211	Metcalf

ZOOLOGY AND ENTOMOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., Tu., F., 1 to 4		
155—156	3	M., W., F., at 9	B. Z. 211	Hine
—162	4	To be arranged	B. Z.	
201—202	1	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	

For Short Courses Only

51—52	4	M., W., Th., F., at 2	B. Z. 211	Hine
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The Ohio State University Bulletin is issued at least twenty times during the year; monthly in July, August, September, and June, and bi-weekly in October, November, December, January, February, March, April, and May.

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The Ohio State University Bulletin

VOLUME XXIII

FEBRUARY, 1919

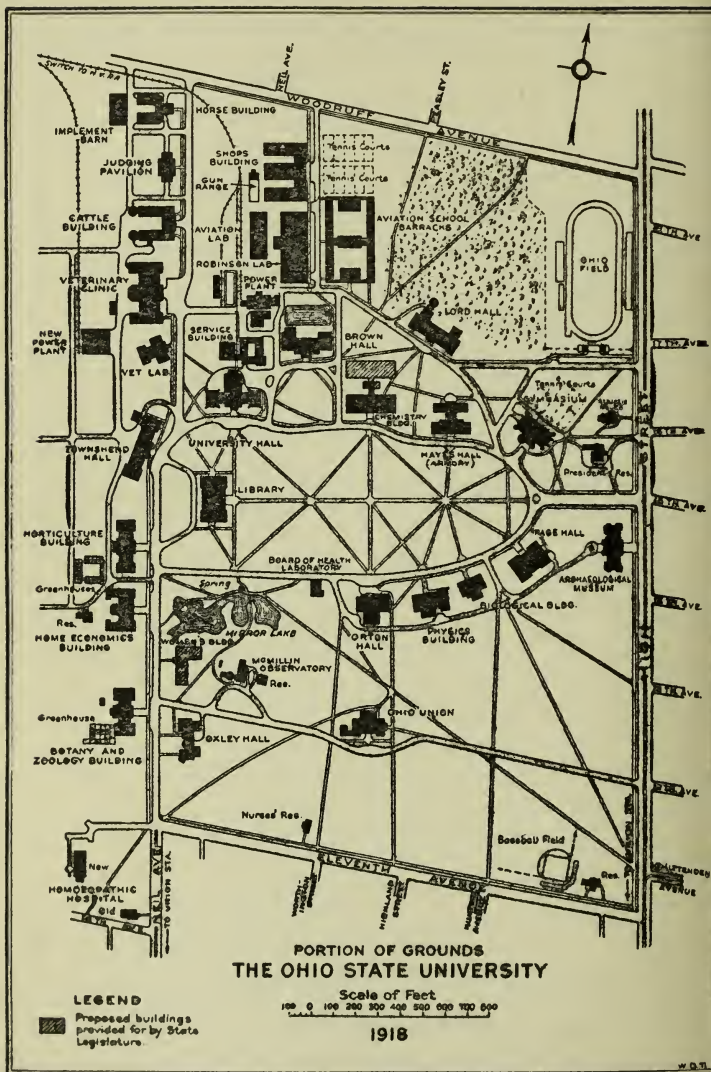
NUMBER 17

COLLEGE OF EDUCATION

1919-1920

PUBLISHED BY THE UNIVERSITY AT COLUMBUS

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UNIVERSITY CALENDAR

1919

- Summer Session, Monday, June 23 to Friday, August 15.
Entrance examinations, Tuesday to Saturday, June 24 to 28,
8 A. M.
Entrance examinations, Tuesday to Saturday, September 9 to
13, 8 A. M.
Registration Day—First Semester—Tuesday, September 16.
President's Annual Address, Wednesday, September 17, 11 A. M.
Latest date for registration of candidates for a degree at the
Commencement in June, 1920, October 1.
Registration Day, Short Courses in Agriculture—First Term—
Tuesday, October 14.
Mid-semester reports to the Deans concerning delinquent stu-
dents, Wednesday, November 19.
Thanksgiving recess begins November 26, 1 P. M., and ends
December 2, 8 A. M.
Christmas recess begins Friday, December 19, 6 P. M.

1920

- Christmas recess ends Tuesday, January 6, 8 A. M.
Registration Day, Short Courses in Agriculture—Second Term—
Tuesday, January 6.
Final examinations, Wednesday, January 21 to Thursday, Jan-
uary 29.
Farmers' Week, Monday, January 26 to Friday, January 30.
First semester ends Thursday, January 29, 6 P. M.
Registration Day—Second Semester—Tuesday, February 3.
University Day, Saturday, February 21.
Close of Second Term, Short Courses in Agriculture, Friday,
March 12.
Mid-semester reports to the Deans, Saturday, March 21.
Easter recess, Thursday noon, April 1 to Tuesday, April 6,
8 A. M.
Competitive Drill—Cadet Regiment—Saturday, May 29.
Memorial Day, Sunday, May 30.
Final examinations, Wednesday, June 3 to Thursday, June 10.
Commencement, Tuesday, June 15.
Summer Session, Monday, June 21 to Friday, August 13.
Entrance examinations, Tuesday, June 22 to Saturday, June 26,
8 A. M.

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THE TRAVELER OF CHINA.

JANUARY.

FEBRUARY.

MARCH.

APRIL.

S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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MAY.

JUNE.

JULY.

AUGUST.

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25	26	27	28	29	30	31	29	30	27	28	29	30	31	24	25	26	27	28	29	30	
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SEPTEMBER.

OCTOBER.

NOVEMBER.

DECEMBER.

S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	
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THE FRANKLIN CO. CHM.

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JANUARY.							FEBRUARY.							MARCH.							APRIL.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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25	26	27	28	29	30	31	29	28	29	30	31	25	26	27	28	29	30
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MAY.							JUNE.							JULY.							AUGUST.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
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23	24	25	26	27	28	29	27	28	29	30	25	26	27	28	29	30	31	29	30	31
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SEPTEMBER.							OCTOBER.							NOVEMBER.							DECEMBER.						
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26	27	28	29	30	24	25	26	27	28	29	30	28	29	30	26	27	28	29	30	31
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Office: 201 Home Economics Building—99367	
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COLLEGE OF EDUCATION

Dean.....	GEORGE W. KNIGHT
Office: 211 University Hall—99375	
Residence: 104 Fifteenth Ave.—11300	
Secretary.....	CHARLES C. McCracken
Office: 211 University Hall—99375	
Residence: 172 E. Lane Ave.—11971	

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the city of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called colleges. The Ohio State University comprises eleven colleges and a graduate school, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Education
College of Agriculture	College of Engineering
College of Arts, Philosophy and Science	College of Homoeopathic Medicine
College of Commerce and Journalism	College of Law
College of Dentistry	College of Medicine
	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a Director and governing committee for the administration of the regular University courses offered in the summer.

This bulletin is devoted exclusively to the work of the College of Education for the academic year, 1919-1920.

(NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing L. E. Wolfe, Secretary of the Entrance Board, Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.)

COLLEGE OF EDUCATION

This college was established by the University for the professional training of teachers, as provided in the school laws of this State. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the college is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this college leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Industrial Education, Home Economics, Agricultural Education, Agricultural Chemistry, American History, Anatomy, Bacteriology, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

PHYSICAL EDUCATION

Provision has been made by the College of Education to meet the demand in the public schools for directors and teachers of physical education, and for athletic coaching. Regular students in the college preparing for high school teaching may include

in their curriculum Physical Education as a "minor subject" and receive credit for it towards their degree. The minor consists of twelve semester hours in addition to the courses required of first and second year students. In each case the approval of the Head of the Department of Physical Education and of the Dean of the college must be obtained.

For further details see the courses as announced on page 87.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Secretary of the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two summer sessions are considered the equivalent of one semester and four summer sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this College. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school teachers' certificate, without examination. This certificate, obtainable from the State Superintendent of Public Instruction on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Manual Training, in Art or in Agricultural-Education are also entitled, without further examination, to a state provisional special cer-

tificate valid for four years, in the appropriate one of the above lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

PROFESSIONAL SUBJECTS

Pursuant to the present School Code of Ohio the State Superintendent of Public Instruction has designated the subjects which are accepted and treated as professional subjects in the training of teachers and which must be included within the minimum of thirty semester hours required of all applicants for state high school provisional or life certificates.

The subjects are, General Psychology, Educational Psychology, History of Education, Principles of Education (or Science of Education), School Administration, Methods of Teaching, either general or special, and Supervised Practice Teaching.

Work in each of the foregoing subjects is absolutely required of all applicants for such certificates. In addition to the above, under certain conditions, Experimental Psychology, Sociology and Philosophy may be counted, if needed, to make up the necessary thirty hours.

The various curricula in the College of Education include all of the subjects necessary to meet the foregoing provisions.

GENERAL INFORMATION

RESERVE OFFICERS' TRAINING CORPS

Under the Defense Act of June 3rd, 1916, there was established at the Ohio State University a Reserve Officers' Training Corps to which all students are eligible who have completed the requirements in Military Drill for the first and second years. Students entering the Reserve Officers' Training Corps are required to complete a practical and theoretical course in Military Science extending through the Junior and Senior years of residence. When this requirement is completed the President of the United States will grant them a commission as Second Lieutenant in the Officers' Reserve Corps when recommended by the Commandant of Cadets and the President of the University.

During this two years of required work the United States will furnish to the student one complete uniform each year and one ration which is commuted at 30 cents per day during the fiscal year.

APPOINTMENT COMMITTEE

In order to serve the schools of the state, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Chairman, Mr. J. L. Clifton, Room 211, University Hall. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the Committee.

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of thirty-five dollars is offered for the best essay on the principles underlying the form of government of the United

States. Competition for this prize is open to all students of the University. For further information, make inquiry of the Head of the Department of American History.

FEES AND EXPENSES

All fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until fees are paid.

Incidental Fee—The fee for all students is fifteen dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit of ten dollars for each course requiring such supplies is made at the Bursar's office before the work is begun. All laboratory supplies are sold at the General Store Room, Chemistry Hall, to students at first cost to the University, and charged against the deposits. Any unused part of the deposit is refunded at the end of the semester.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

Cadet Uniform. The uniform with which the members of the regiment are required to provide themselves costs (without overcoat) about twelve dollars. It is quiet in pattern, and may be worn in place of civilian dress. New students are advised against buying second-hand uniforms unless they have been previously inspected and approved by the Commandant. Inspection has shown in many cases that second-hand uniforms were unfit to wear and certainly not worth the price asked for them. All such uniforms are subject to rejection by the Com-

mandant. Students should not arrange for uniforms until so directed by the military authorities.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid on or before the last Friday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Text-books. Students should not purchase text-books until they are advised by the instructors of their respective classes.

EXPENSES PER YEAR

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost for the freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Incidental fee.....	\$ 30 00
Ohio Union.....	2 00
Gymnasium locker.....	4 00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	20 00
Cadet uniform, gloves and shirt.....	15 00
Books	15 00
Board—36 weeks at \$4.50 per week.....	162 00
Room rent, at \$10.00 per month.....	90 00
General expenses.....	100 00
	<hr/>
	\$438 00

The item of general expenses is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

In order to meet all the necessary expenses of registration, books, uniform, and other expenditures incident to securing a room and board, a student should come prepared to expend from sixty-five to seventy-five dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.

WOMEN STUDENTS

As far as possible women students should make arrangements for room and board in advance. An effort will be made to secure suitable accommodations in private residences for such as cannot be accommodated in Oxley Hall. Prospective women students should address Mrs. George L. Converse, Acting Dean of Women, The Ohio State University, Columbus, Ohio.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$300 for the academic year and in addition all fees are remitted, except a diploma fee, for those students who receive degrees. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree

from an approved institution, and have a value of \$250 with exemption from all fixed fees. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applications not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

ADMISSION

The College is open on equal terms to both sexes. Applicants for admission should be at least sixteen years of age.

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, an applicant for admission must be a graduate of a high school of the first grade or obtain credit by examination for fifteen entrance units.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded, as he will be required to carry courses in the University to make

up the deficiency and he may not be able to obtain a degree in the usual four years.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, manual training, home economics, and agriculture.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

GENERAL COURSE

The work of the first two years must include:

(a) English

(a) English 101 and 104 (2-2) 4 hours

English 133 and either English 141, 142,
145 or 146 (3-3) 6 hours

English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency.

(b) Languages

(b) One of the following languages
which must be pursued through
both the first and second years: (4-4-4-4) 16 hours
Greek, Latin, French, German, Spanish.
The second year will not be required of students who
offer six entrance units in foreign language.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) Mathematics

- (c) Mathematics 121-122: (3-3) 6 hours, or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study. Every student must secure credit either in high school, or in the college for algebra through quadratics, and for plane geometry.

(d) Science

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104
Chemistry 105-106 or 109-110
Geology 101-102
Astronomy 101-102

Biological:

Physiology 101-102
Zoology 101-102
Botany 101-102

Every student is required to take one of the above sciences in college, and every student is also required to have either entrance or college credit for both a biological and a non-biological science. Students who enter without one unit in physics or in chemistry must take one of these subjects in college. Students who enter without one unit in zoology or in botany must take a biological science in college. Students who

have entrance credit for one unit in physics or chemistry and one unit in zoology or in botany must take a science in college.

(e) History

(e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one unit of history for entrance the requirement is twelve semester hours.

(f) Psychology

(3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education, not less than 6 hours

Elements of Sociology, not less than 6 hours

Educational Psychology, not less than 4 hours

The Principles and Practice of Teaching, 6 or 9 hours

School Administration, 3 or 6 hours

A course in the teaching of the major subject, not less than 2 hours.

(2) Major Courses

The work which the student is preparing to teach (selected in the first or second year)—hours enough, usually thirty semester hours, to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps, (as defined in General Orders No. 49 as may be amended in the future by the War Department) the total number of hours required in the General Course for the degree of Bachelor of Science in Education is 112 (instead of 120) semester hours, in addition to the work in military training and physical education. For the other curricula in the College of Education a like reduction of eight hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

CURRICULA

GENERAL COURSE

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Group (b)	4	Group (b)	4
Group (c) or elective	3	Group (c) or elective	3
Group (d)	4	Group (d)	4
Group (e)	3	Group (e)	4
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

English	(141 or 145)	} 3	English	(133)	} 3
or			or		
English	(133)	} 3	English	(142 or 146)	} 3
Psychology	(101)		Psychology	(102)	
Group (b)	4		Group (b)	4	
Major Work	5		Major Work	5	
Military Drill	1		Military Drill	1	
Physical Education (women)	1		Physical Education (women)	1	

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
History of Education	(101) 3	History of Education	(102) 3
Educational Psychology	(107) 2	Educational Psychology	(108) 2
Major Work	5	*Major Work	5
Correlated Work	2	Correlated Work	2

FOURTH YEAR

Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
or		School Administration	(112 or 114)
Principles and Practice of Education	(104) 3	or	
School Administration	(101)	Principles of Education	(105 or 106)
or	} 3		
School Administration (111 or 113)		Major Work	5
Major Work	5	Elective	4
Elective	4		

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

*NOTE: Principles of Education (101) 3 hours, or School Administration (101) 3 hours may be taken in the second semester and 3 hours of major work postponed until the fourth year.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, exclusive of the requirement in military drill and physical education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units or less than three, of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the biological science required in the curriculum.

Students who enter without one unit in history, must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART

FIRST YEAR			
First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 3	Botany	(102) 3
European History	(101) 3	European History	(102) 3
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR			
English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Drill	1	Military Drill	1

For Students Majoring in Drawing

THIRD YEAR			
Sociology	(101) 3	Sociology	(102) 2
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(135) 4
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	3	Elective	2

FOURTH YEAR			
History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

For Students Majoring in Design

THIRD YEAR			
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(134) 2
Art	(142) 3	Art	(143) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	3

FOURTH YEAR

First Semester

History of Education	(101)	3
Principles and Practice of Education	(101)	3
Art	(135)	4
Art	(117)	3
School Administration	(101)	3

Second Semester

History of Education	(102)	3
Principles and Practice of Education	(104)	3
Art	(144)	3
Art	(145)	3
Elective		3

For Students Majoring in History and Appreciation of Art

THIRD YEAR

Sociology	(101)	3	Sociology	(102)	3
Psychology	(107)	2	Psychology	(108)	2
Art	(153)	3	Art	(155)	2
Art	(154)	2	Art	(156)	2
Engineering Drawing	(131)	3	Engineering Drawing	(132)	3
Elective		2	Elective		4

FOURTH YEAR

History of Education	(101)	3	History of Education	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Art	(157)	3	Art	(158)	5
Art	(117)	3	Elective		4
School Administration	(101)	3			

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units and less than

three of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics must take this subject in addition to the science requirements of the course.

Students who enter without one unit in history, must take at least six semester hours, of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester		Second Semester	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
English	(101) 2	English	(104) 2
Zoology	(101) 3	Zoology	(102) 3
French or German	4	French or German	4
Home Economics	(111) 2	Home Economics	(112) 2
Physical Education	1	Art	(119) 1
		Physical Education	1

SECOND YEAR

Chemistry	(127) 4	Agricultural Chemistry	(123) 4
Home Economics	(101) 5	Home Economics	(102) 5
Physiology	(101) 3	Physiology	(102) 3
French or German	4	French or German	4
Physical Education	1	Physical Education	1

THIRD YEAR

Psychology	(101) 3	Psychology	(102) 3
Economics	(101) 3	Economics	(102) 3
Bacteriology	(107) 4	Home Economics	(103) 2
Art	(131) 2	Home Economics	(104) 3
History of Education	(101) 3	Art	(141) 2
		History of Education	(102) 3

FOURTH YEAR

Sociology	(101) 3	Sociology	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Home Economics	(118) 3	School Administration	
School Administration	(101) 3	or	(112 or 114) 3
Elective	4	Principles of Education	
			(105 or 106) 3
		Home Economics	(119) 3
		Elective	4

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects in addition to the requirement of the course. Students who enter without one unit in zoology or in botany, must take a biological science. Students who enter without one unit in history, must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

FIRST YEAR

First Semester			Second Semester		
English	(101)	2	English	(104)	2
Mathematics	(121)	3	Mathematics	(122)	3
Art	(119)	1	Art	(141)	2
Art	(131)	2	Industrial Education	(125)	2
Engineering Drawing	(139)	4	Engineering Drawing	(140)	3
Foreign Language		4	Foreign Language		4
Military Drill		1	Military Drill		1
Physical Education		1	Physical Education		1

SECOND YEAR

English	(141 or 145)	3	English	(133)	3
or			or		
English	(133)	3	English	(142 or 146)	3
Foreign Language		4	Foreign Language		4
Psychology	(101)	3	Psychology	(102)	3
Industrial Education	(127)	3	Industrial Education	(123)	3
Shopwork	(105)	2	Shopwork	(115)	2
Military Drill		1	Military Drill		1
Elective		2 or 3	Elective		2 or 3

THIRD YEAR

Chemistry	(105 or 109)	4	Chemistry	(106 or 110)	4
or			or		
Physics	(103 or 105)	4	Physics	(104 or 106)	4
Sociology	(101)	3	Sociology	(102)	3
Psychology	(107)	2	Psychology	(103)	2
Industrial Education	(117)	2	Industrial Education	(118)	2
Shopwork	(119)	3	Industrial Education	(129)	2
Elective		2 to 4	Elective		3 or 4

FOURTH YEAR

History of Education	(101)	3	History of Education	(102)	3
Industrial Education	(111)	3	Industrial Education	(112)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
School Administration	(101)	3	Elective		6 to 9
Elective		3 to 6			

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

AGRICULTURAL EDUCATION

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or chemistry, must take one of these subjects, in addition to the requirement of the course.

Students who enter without one unit in zoology or in botany, must take a biological science in addition to the requirement of the course.

Students who enter without one unit in history, must take at least six semester hours of either American or European history.

AGRICULTURAL EDUCATION

FIRST YEAR

First Semester		Second Semester	
School Administration	(123) 3	School Administration	(124) 3
Elements of Agriculture		Elements of Agriculture	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
Rural Economics	(101) 2	Engineering Drawing	(125) 2
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Military Drill	1	Military Drill	1
Physical Education	1	Physical Education	1

SECOND YEAR

Economics	(101) 3	Economics	(102) 3
Psychology	(101) 3	Psychology	(102) 3
Zoology	(101) 3	Zoology	(102) 3
Botany	(101) 3	Botany	(102) 3
Animal Husbandry	(135) 4	Horticulture	(156) 2
Military Drill	1	Military Drill	1

THIRD YEAR

History of Education	(101) 3	History of Education	(102) 3
Horticulture	(101) 4	Horticulture	(120) 4
Dairying	(101) 4	Agricultural Engineering	(101) 4
Animal Husbandry	(137) 3	Horticulture	(134) 4
Elective	2		

FOURTH YEAR

School Administration	(127) 2	School Administration	(122) 2
Principles of Education	(101) 3	Principles of Education	(104) 3
Zoology	(107) 3	Zoology	(103) 3
Geology	(151) 3	Farm Crops	(101) 4
School Administration	(101) 3	Elective	3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credit for one hundred and forty hours, exclusive of the requirement in military drill and physical education, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.

Students registered for this combined Arts-Education curriculum must ordinarily expect to use at least one summer session in addition to the four years to complete the work.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN, LYMAN AND BEAR, ASSISTANT PROFESSOR
T. G. PHILLIPS, MR. McCLURE, MR. CONREY, MR. WORKMAN,
MR. FRONING, MR. HALEY, MR. WATSON,
AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. Household Chemistry. Four credit hours. Second semester. Home Economics. Prerequisite, Chemistry 106 or 110, and 127. Mr. Lyman, Mr. Froning.

Lectures on household chemistry. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods and other materials of household interest.

SOILS

152. Elementary Soils. Five credit hours. Second semester. Two lectures, one quiz and six laboratory hours each week. Prerequisite, Agricultural Chemistry 103. Mr. Vivian, Mr. Bear.

An introductory course on the origin and the chemical and physical properties of soils, their management and fertilization.

AGRICULTURAL EDUCATION

(See School Administration)

AGRICULTURAL ENGINEERING

Office, 201 Machinery Laboratory

PROFESSOR RAMSOWER, ASSISTANT PROFESSORS IVES AND
McCUEN, MR. POTTER

101. Farm Engineering. Four credit hours. Either semester. Prerequisite, Engineering Drawing 125, Mathematics 107, Physics 109. Mr. Ramsower, Mr. Potter.

Lectures and recitations on the laying out and equipment of the farm, and a detailed study of farm power, water supply, and farm machinery. Practice in the comparison and testing of farm machines, handling concrete, rope splicing and in the working out of problems in farm mechanics.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT, HOCKETT AND SCHLESINGER,
MR. WOOD, MR. WITKE

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), courses 101-102 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher, 101-102, 103-104, 119, 128, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 101-102 and Economics 101-102 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1918). Three credit hours. The year. Mr. Hockett, Mr. Schlesinger, Mr. Wood, Mr. Wittke.

American History 101 is given also during the second semester, and American History 102 in the first semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases receive chief attention. The first semester covers the period 1763-1829. The second semester covers the period 1829-1918. Text-book, discussion, and collateral readings. This course must precede all other courses in American history, except 118 and 125-126.

107. Formation of the Constitution. Two credit hours. First semester. Prerequisite, American History 101-102. Political Science 133 or 101 will be found a valuable adjunct to this course. Mr. Hockett.

Beginning with a brief study of the constitutional ideas of Americans in the revolutionary period, the course traces the formation of the federal constitution by the convention of 1787,

and discusses the constitutional problems involved in the establishment of the government. Lectures, discussion and reports.

108. Constitutional History of the United States. Two credit hours. Second semester. Prerequisite, American History 101-102. American History 107 affords a good foundation, and Political Science 133 or 101 a valuable adjunct. Mr. Hockett.

The chief controversies over the interpretation of the constitution and the effects of these controversies upon the evolution of the American constitutional system. Such questions are dealt with as the acquisition of territory, internal improvements, the tariff, slavery, and the relations of the nation and the states. Lectures, discussion and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102. Mr. Schlesinger.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1920). Two credit hours. Second semester. Prerequisite, American History 101-102. American History 109 affords a good foundation. Mr. Schlesinger.

The development of national parties in the period from 1852 to the re-election of Woodrow Wilson and after, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion and reports.

***103-104. The American Colonies, 1600-1783.** Three credit hours. The year. Prerequisite, American History 101-102. Mr. Wood.

*Not given in 1919-1920.

The general history of the English colonies in America, with especial emphasis on European conditions affecting colonization, the development of government in the several colonies, and relations with the mother country, including the struggle for independence. Lectures, discussion and reports.

118. History of Canada. Two credit hours. Second semester. Not open to first year students. Mr. Wittke.

Special attention is given to the period since the Dominion Act of 1867, to the relations of Canada with the mother country and with the United States, and to a comparison of Canadian with American development and institutions. Lectures, readings, and reports.

128. The History of Ohio. Two credit hours. Second semester. Prerequisite, American History 101-102. Mr. Hockett.

The settlement and early development of the state will be surveyed rapidly, and more intensive study given to the period since 1850. Lectures, discussion and reports.

NOTE: For course, War Issues, see European History 131-132: **The World War: its Causes, Issues and Results.** Three credit hours. The year. Not open to first year students.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American history.

119. Introduction to Historical Research. Two credit hours. First semester. Prerequisite, four semesters in American history. Mr. Hockett.

Drill in finding historical material by the use of standard guides, manuals, and catalogs, followed by practice in criticizing material, and exercises in historical composition. Each student then applies what has been learned by preparing an essay. Attention is given throughout to approved forms for note-taking, citation of authorities, etc. Designed especially for students who expect to teach American history in secondary schools, or to pursue graduate work in this field.

***111. The Slavery Struggle in the United States.** Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

***112. Reconstruction and its Results, 1863-1920.** Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Schlesinger.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

113. American Diplomacy to the Close of the Civil War. Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Schlesinger.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussion and reports.

114. Problems of American Diplomacy Since the Civil War. Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Knight.

*Not given in 1919-1920.

Problems in the diplomacy of the United States, resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussion and reports.

130. Contemporary Accounts of American Life and Institutions. Three credit hours. Second semester. Given biennially. Prerequisites, American History 101-102, and at least two other semesters in American history. Mr. Schlesinger.

A critical study of the chief descriptions, criticisms and interpretations of American life and manners at different periods, written contemporaneously with the times discussed. Particular attention is given to the accounts by William Cobbett, the Trollopes, Harriet Martineau, De Tocqueville, Dickens, Chevalier, Charles Lyell and James Bryce.

121. The Teaching of American History. Two credit hours. First semester. Given biennially. Mr. Knight.

Lectures, reading and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment, examination of text-books; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

123-124. Recent History of the United States, 1870-1919. Three credit hours. The year. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Economics 101-102 will be found a valuable adjunct to this course. Mr. Knight.

An intensive study of the political, constitutional, industrial and social life of the nation and the state during the past genera-

tion; it includes a consideration of new applications of the constitution, industrial development, territorial expansion, the entry of the United States into the world politics, third party movements, and the rise of the new democracy. Lectures and individual investigations.

FOR GRADUATES

*203-204. The United States and Latin-America, 1800-1905.

205-206. Seminary in American History.

*209. History of the Westward Movement to 1812.

*210. History of the Westward Movement since 1812.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANATOMY

Office, 105 Biological Hall

PROFESSOR LANDACRE, ASSISTANT PROFESSORS BUCK AND WARREN, MR. KNOUFF, MR. BAKER

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Baker.

Fishes, amphibians and reptiles.

102. Comparative Anatomy of the Vertebrates. Three or five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101, or an equivalent. Mr. Baker.

Birds and mammals.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study.

*Not given in 1919-1920.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight laboratory hours each week. Not open to first year students. Mr. Landacre.

The histology and early development of the frog.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisite, one year of biological science. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Prerequisites, one year of biological science. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

116. The Digestive System. Three credit hours. Second semester. One lecture and four laboratory hours each week. Elective for third or fourth year students. Prerequisite, one year's work in biological science. Mr. Landacre, Mr. Buck, Mr. Warren.

A study of the gross and microscopic structure of the digestive system and associated organs in one of the higher mammals and in man.

118. Elementary Comparative Anatomy of Vertebrates. Three to five credit hours. Second semester. One lecture and five to eight laboratory hours each week. Required of students in the Arts-Medicine and Science-Medicine courses. Prerequisites, Zoology 101, Physiology 101 or an equivalent. Mr. Landacre, Mr. Knouff, Mr. Baker.

A preliminary study of the comparative anatomy and embryology of the vertebrates accompanied by careful dissections of the shark, frog and cat. This course meets the pre-medical requirements in Anatomy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Comparative Neurology. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates.

110. Comparative Neurology. Three to five credit hours. Second semester. One lecture or conference and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

FOR GRADUATES

201-202. Vertebrate Embryology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANIMAL HUSBANDRY

Judging Pavilion

PROFESSORS PLUMB AND KAYS, ASSISTANT PROFESSOR COFFEY

135. Elementary Live Stock Judging. Four credit hours. Either semester. Second year. Two lectures and four laboratory hours each week.

Students intending to give much attention to animal husbandry courses should take this course the first semester. Students taking but one course in animal husbandry are required to take this.

An elementary study of the relationship of form to function in horses, cattle, sheep and swine.

137. Principles of Feeding. Three credit hours. Either semester. Second year. Prerequisite, Animal Husbandry 135 and Agricultural Chemistry.

An elementary study of digestion and assimilation, feeding standards, composition of feeding stuffs and feeding practices.

ART

Office, 203 Hayes Hall

PROFESSOR KELLEY, ASSISTANT PROFESSOR ROBINSON,
MR. NORRIS, MR. CHRISTENSEN, MISS TALBOT, MISS SMITH

131-132. Elementary Drawing. Two credit hours. The year. This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also during the second semester.

Art 132 is given also during the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133.

135. Illustrative Drawing. Four credit hours. Either semester. Prerequisite, Art 134.

Different methods of drawing for illustration.

136. Water Color Painting. Two credit hours. Either semester. Prerequisite, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. Advanced Water Color. Three credit hours. Second semester. Prerequisite, Art 136.

138. Oil Painting. Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. **Advanced Oil Painting.** Three credit hours. **Second semester.** Prerequisite, Art 138.

Painting from the costume model.

141. **Elementary Design.** Two credit hours. **Either semester.** Prerequisite, Art 131 and 119.

The principles of the theory and practice of design.

142. **Advanced Design.** Three credit hours. **Either semester.** Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. **Specialized Design.** Three credit hours. **Second semester.** Prerequisite, Art 142 or Art 121.

Field to be chosen by the student. Recommended for students desiring to study interior decoration.

144. **Commercial Design.** Three credit hours. **Second semester.** Prerequisite, Art 142.

This course is aimed to give a grasp of commercial design problems.

145. **Thesis Work Design.** Three credit hours. **Second semester.** Prerequisite, Art 143.

This course is required of students graduating in design.

151. **History of Classic Art.** Three credit hours. **Either semester.** Not open to first year students.

The study of classic art with some consideration of the art of Egypt, Assyria, and Persia. Reading and reports.

152. **History of Medieval Art.** Three credit hours. **Second semester.** Prerequisite, Art 151. Not open to first year students. Reading and reports.

153. **History of Renaissance and Modern Art.** Three credit hours. **First semester.** Prerequisite, Art 151. Not open to first year students.

From the beginning of the Renaissance in Italy to the present time. Reading and reports.

160. Modern Painting and Sculpture. Three credit hours. Second semester. Three lectures a week and occasional reports. Mr. Kelley.

This course will deal with the art of the last two centuries, laying particular stress upon the development in France, England and the United States.

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments and observations.

119. Appreciation of Art. One credit hour. Either semester.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141. Miss Talbot.

Art in dress; the direct application of design principles and color harmony to dress.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

154. Greek Sculpture. Two credit hours. First semester. Prerequisite, Art 151. Mr. Christensen.

Reading and short thesis.

155. The Italian Schools of Painting. Two credit hours. Second semester. Prerequisite, Art 151, 152, 153. Mr. Christensen.

Reading and short thesis.

156. The Netherlandish Schools of Painting. Two credit hours. Second semester. Prerequisites, Art 151, 152, 153. Miss Robinson.

Reading and short thesis.

157. Art of China and Japan. Three credit hours. First semester. Prerequisite, junior standing and at least two other courses in this department. Mr. Kelley.

Reading and reports.

158. **Thesis in Art History.** Five credit hours. Second semester. Prerequisite, fifteen hours of art history. Mr. Kelley. This course is required of students graduating in art history.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. **General Astronomy.** Three credit hours. The year. Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. **Astronomy, Geodesy and Least Squares.** Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. **Advanced Astronomy.** Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSORS MORREY AND STARIN, MRS. MASTERS, AND
DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in bacteriology are open to advanced undergraduates and graduate students only, not to freshmen or sophomores. The instructor in charge must be consulted before electing.

107. **General Bacteriology.** Four or five credit hours. First semester. Mr. Morrey, Mrs. Masters, and department assistants.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making

of cultures on these media, staining methods and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the more important bacteria producing diseases in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the methods and devices used in these processes and of the organisms concerned. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

116. Bacteriological Chemistry. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

119-120. Pathogenic Protozoa. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmosis, and spirochaetosis.

125-126. **Special Problems in Bacteriology.** Three to five credit hours. The year. Conferences, library and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

FOR GRADUATES

201-202. **Research in Pathogenic Bacteriology.**

203-204. **Research in Agricultural Bacteriology.**

BIBLIOGRAPHY

Office, The Library

MISS JONES, MR. REEDER

101-102. **The Library and the School.** One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS TRANSEAU AND SCHAFFNER, ASSISTANT PROFESSORS GRIGGS AND STOVER, MISS DETMERS, MR. SEARS, MR. SAMPSON, MR. WALLER, AND DEPARTMENT ASSISTANTS

101-102. **General Botany.** Three credit hours. The year. Two recitations and two laboratory hours each week. Mr. Griggs, Mr. Stover, Miss Detmers, Mr. Sears, Mr. Sampson.

A study of the structures and processes of plants, and their relation to the environment. A general survey of the great plant groups.

107. **Plant Histology.** Two credit hours. First semester. One lecture and two laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

The physical structure and properties of protoplasm are studied; then, in order, the cell, the tissues, tissue systems and finally the histological structure of the plant organs are taken up.

108. Ecological Anatomy. Two credit hours. Second semester. One lecture and two laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

A study of plant structures in relation to environment.

110. General Dendrology. Two credit hours. First semester. One lecture and two laboratory hours each week. Mr. Griggs.

Text-book: Schaffner's Field Manual of Trees.

A study of trees and shrubs, with practice in the identification of woody plants, in both summer and winter condition. Students are required to prepare a dendrological herbarium.

120. Field Botany. Three credit hours. Second semester. One field trip and two laboratory hours each week. Prerequisite, Botany 101. Mr. Griggs.

Field and laboratory study of the local flora. A large share of the time is spent in practice in the identification of the plants native to central Ohio.

123. Morphology of Lower Plants. Four credit hours. First semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of algae, fungi, and bryophytes.

124. Morphology of Vascular Plants. Four credit hours. Second semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of ferns and seed plants.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisite, Botany 101-102 and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory and field work, with practice teaching under supervision.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

117-118. Plant Ecology. Three credit hours. The year. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Transeau.

The ecological relations of the forests, prairies, and deserts of North America. Field work on the local plant associations.

127-128. Plant Pathology. Four credit hours. The year. Two lectures and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Stover.

129-130. Systematic Botany. Three to five credit hours. The year. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phyletic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

133-134. Minor Investigations. Three to five credit hours. The year. Prerequisite, Botany 101-102 and one additional year of some biological subject. Mr. Transeau, Mr. Schaffner, Mr. Griggs, Mr. Stover, Miss Detmers, Mr. Sampson.

135-136. Evolution of Plants. One credit hour. The year. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Schaffner.

The progress of evolution in the plant kingdom with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

FOR GRADUATES

- 201-202. Research in Systematic Botany.
- 203-204. Research in Morphology and Cytology.
- 205-206. Research in Physiology and Ecology.
- 207-208. Research in Mycology and Plant Pathology.
- 209-210. Seminary in Botany.

For description of graduate courses in this department see the Bulletin of the Graduate School.

CHEMISTRY

Office, 100 Chemistry Hall

PROFESSORS McPHERSON, HENDERSON, FOULK, WILLIAM L. EVANS,
AND WITHROW, ASSISTANT PROFESSORS BOORD AND DAY,
MR. HOLLINGSWORTH, MR. ADKINS, MR. VILBRANDT,
MR. HOOVER, MR. STARR, MR. MARLING,
MR. LOOKER, MR. MELLON, AND
DEPARTMENT ASSISTANTS

105. Elementary Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the non-metals, arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Chemistry 106, second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Either semester. Prerequisite, Chemistry 105. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the metals. The laboratory work accompanying is a general introductory course in qualitative analysis.

109. General Chemistry. Four credit hours. Either semester. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the non-metals. It is more advanced than Chemistry 105 and is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Chemistry 110, second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Either semester. Prerequisite, Chemistry 109. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of non-metals. It is more advanced than Chemistry 106. The laboratory work is a general course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. Prerequisite, Chemistry 106 or 110. Mr. Henderson, Mr. Mellon.

A course of fundamental topics in the field of advanced general chemistry.

117. Qualitative Analysis. Three credit hours. First semester. One lecture and six laboratory hours each week. Prerequisite, an acceptable course in general chemistry. Mr. Hollingsworth.

An elementary course in qualitative analysis. Similar to Chemistry 106 and 110 and is arranged for students with advanced standing who have had no qualitative analysis.

119-120. Quantitative Analysis. Four credit hours. The year. One lecture, nine laboratory hours each week. Laboratory open forenoons and afternoons. Prerequisite, Chemistry 106 or 110 or equivalent. Mr. Foulk, Mr. Hollingsworth, Mr. Ort.

Elementary principles of gravimetric and volumetric analysis, with typical analytical methods. This course must be accompanied by Chemistry 124, except by special permission of the instructor. It is also desirable that it be accompanied by Chemistry 113-114.

124. Chemical Problems. One credit hour. Second semester. Mr. Foulk, Mr. Ort.

Extended practice in the solution of problems pertaining to gravimetric and volumetric analysis. This course is arranged to accompany Chemistry 119-120.

127. **Organic Chemistry.** Four credit hours. First semester. Three lectures, one quiz each week. Prerequisite, an acceptable course in general chemistry. Mr. Boord.

This is a general introductory course in organic chemistry.

151-152. **Organic Chemistry.** Two credit hours. The year. Prerequisite, Chemistry 109-110, 113-114 and 119-120, except by special permission of the instructor. Mr. McPherson.

Lectures in organic chemistry.

153-154. **Organic Chemistry.** Two or three credit hours. The year. Six or nine laboratory hours each week. Laboratory open afternoons. This course must be accompanied or preceded by Chemistry 151-152. Mr. McPherson, Mr. Boord, Mr. Adkins.

The preparation of typical organic compounds.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157-158. **Physical Chemistry.** Three credit hours. The year. Prerequisite, Chemistry 113-114, 119-120 and 151-152, except by special permission of the instructor. Mr. Henderson.

This is a general course in physical chemistry.

161. **Physical Chemistry.** Two or three credit hours. Either semester. Six to nine laboratory hours each week. Prerequisite or concurrent, Chemistry 157-158. Mr. Henderson, Mr. Mellon.

An elementary course in physico-chemical measurements, including such topics as molecular weights and conductivity.

187. **Inorganic Preparations.** Three credit hours. Either semester. One recitation and six laboratory hours each week. Laboratory open afternoons. Prerequisite, Chemistry 114 and 120. Mr. Henderson, Mr. Mellon.

The preparation of a limited number of compounds chosen so as to give practice in the preparation of inorganic compounds.

132. **The Teaching of Chemistry.** Two credit hours. Second semester. Two recitations or conferences each week. Elec-

tive. Prerequisite, Chemistry 105-106 (or 109-110), 119, 151-152. Mr. McPherson.

For description of graduate courses in this department see the Bulletin of the Graduate School.

COMPARATIVE LITERATURE AND LANGUAGE

PROFESSOR BOLLING, ASSISTANT PROFESSOR BARROWS

197. English Sounds for Foreigners. Two credit hours. First semester. No prerequisite. Miss Barrows.

The object of this course is to give the student fluency and accuracy in the use of English sounds, by means of a detailed comparison of the sounds in the native language of the student with those of English; exercises in articulation, adapted in each case to the individual needs of the student; practice in reading aloud.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

195. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

DAIRYING

Office, 111 Townshend Hall

PROFESSOR ERF, ASSISTANT PROFESSOR STOLTZ, MR. HOLDSON

101. Principles of Dairying. Four credit hours. Either semester. Prerequisite to all other courses in dairying. Mr. Stoltz.

Lectures will be given on the relation of dairying to general agriculture; the composition of dairy products and the laws governing them; the secretion of milk and the testing of milk for butter fat; the formation of profitable herds; testing individual cows and herds for butter fat; entering and testing cows for Advanced Registries. In the laboratory, practical work will be given in the testing of milk and dairy products, and testing dairy herds for butter fat production.

ECONOMICS AND SOCIOLOGY

Office, 5 Page Hall

PROFESSORS HAGERTY, HAMMOND, LOCKHART, HUNTINGTON, RUGGLES, PARRY AND NORTH, ASSISTANT PROFESSORS WALRADT, MARK AND TAFT, MR. McKENZIE, MR. BICE, MR. SHEPPARD, MR. WEIDLER, MR. COON, MR. BLOOR, MR. McJOHNSTON, AND DEPARTMENT ASSISTANTS

ECONOMICS

The following courses are open only to advanced undergraduates and graduates: 119, 141, 144, 159, 160, 165, 166, 203, 204, 207-216.

101-102. Principles of Economics. Three credit hours. The year. Not open to first year students. Should precede all courses in Economics except 132, 133, concurrent 139. Mr. Hammond, Mr. Lockhart, Mr. Ruggles, Mr. Parry, and instructors.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Text-book, lectures and individual investigation.

Economics 102 is given also during the first semester. Mr. Walradt and instructors.

Economics 101 is given also during the second semester. Mr. Walradt and instructors.

119. Women in Industry. Three credit hours. First semester. Prerequisite, Economics 101-102 or Sociology 101-102. Miss Mark.

A study of the economic position of women. Their relation to the household; their industrial and commercial opportunities; their preparation for various occupations. Legal, social and industrial problems created by the entrance of women into the field of industry.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102, or Economics 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effect upon the home. Organiza-

tion of the household with reference to the functions of man and woman.

132. Principles of Social Geography. Three credit hours. First semester. Not open to juniors and seniors. Prerequisite to all courses in economic geography. Mr. Huntington.

The geographic factors in environment, land, water, climate, plants and animals; their influence upon man, his distribution and his activities; and the uses which man makes of his geographic environment to gratify his manifold wants.

133. Economic Geography. Three credit hours. Second semester. Not open to juniors and seniors. Prerequisite to all advanced courses in economic geography. Mr. Huntington.

The influences of geographic environment, with special reference to North America.

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 101-102. Mr. Lockhart.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141. Mr. Lockhart.

A critical examination of tax systems with particular reference to questions of incidents and of proposed reforms. The Ohio system of taxation will be given special consideration.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Huntington.

A study of the basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

This course is followed by Course 184.

160. International Commercial Policies. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Parry, Mr. Weidler.

Theory of international trade; historic policies, mercantilism, free-trade and protection. A study of the tariff policy of the United States, with a comparative study of the policies of the British Empire, France and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Hammond.

A study of the labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. The Organization and Remuneration of Labor. Three credit hours. Second semester. Prerequisite, Economics 101-102. Mr. Hammond.

History of the labor movement. Trade union policies and methods. Employers' organizations. Collective bargaining. Industrial arbitration. Attempts to modify the wage system. Time, piece, and progressive wages. Profit sharing, labor co-partnership and cooperation.

FOR GRADUATES

203-204. Distribution of Wealth.

207-208. Seminary in Economics.

209-210. Research in Corporations and Labor.

211-212. Research in Transportation and Public Utilities.

213-214. Research in Banking and Finance.

215-216. Research in Economic and Social Statistics.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SOCIOLOGY

The following courses are open only to advanced undergraduates and graduates: 104, 105, 131, 201, 202, 207, 208.

101-102. Principles of Sociology. Three credit hours. The year. Mr. Hagerty, Mr. North, Miss Mark, Mr. McKenzie.

Not open to first year students.

A study of the fundamental principles of sociology. Text-book, lectures, collateral reading and individual investigation.

Sociology 101 is given also during the second semester.

Sociology 102 is given also during the first semester.

104. The Immigrant. Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Taft.

The causes and sources of migration, provisions for transportation, immigration laws, and the assimilation of nationalities.

105. The Negro. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Taft.

Tropical man and the results of his transference to a temperate climate. Negro health, crime, education and progress in the United States.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102. Mr. McKenzie.

A study of the matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman and Medieval periods. The modern family, its functions and its problems.

123. Anthropology. Three credit hours. First semester.

An elementary study of the essential characteristics of mankind and of the distinguishing traits of the several races of men; the origin and development of various races. Anthropological problems. Text-book, lectures, discussion and readings.

124. Ethnology. Three credit hours. Second semester. Prerequisite, Sociology 123.

A genetic study of the social, occupational, and mental life of the several races of men. The origin and development of the various institutions and activities which have had their beginning in primitive society. Ethnological problems. Text-book, lectures, discussion and readings.

127. Leisure and Recreation. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101. Mr. North.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problem of modern communities from the standpoint of control and of public provision. Recreation surveys.

128. Social Organization and Administration of Recreation Facilities. Three credit hours. Second semester. Prerequisite, Sociology 127. Mr. North.

Methods and means of control of commercialized recreation with especial reference to American cities and towns. The promotion and organization of public and semi-public agencies. The administrative control of play-grounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

131. The Criminal. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

The social, economic and physiological causes of crime. The changing character of crime as modified by the legal code. Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

FOR GRADUATES

201-202. Advanced Sociology.

207-208. Seminary in Sociology.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSOR FRENCH, ASSISTANT PROFESSORS MEIKLEJOHN,
WILLIAMS, TURNBULL, AND SVENSEN, MR. FIELD,
AND DEPARTMENT ASSISTANTS

101. Elementary Mechanical Drawing. Two credit hours. Either semester. Mr. French and department assistants.

Practice in the use of drawing instruments, elementary projections.

102. Mechanical Drawing. Three credit hours. Either semester. Prerequisites, Engineering Drawing 101 or 139. Mr. French and department assistants.

103. Descriptive Geometry. Three credit hours. First semester. Prerequisite, Engineering Drawing 102. Mr. French and department assistants.

Two recitations and one two-hour drawing period each week.

104. Machine Drawing. Three credit hours. Second semester. Prerequisite, Engineering Drawing 103. Mr. Williams, Mr. Svensen.

One lecture and two two-hour drawing periods each week.

139. Drawing for Manual Arts Teachers. Four credit hours. First semester. Industrial Education, first year.

140. Drawing for Manual Arts Teachers. Three credit hours. Second semester. Prerequisite, Engineering Drawing 139. Industrial Education, first year.

125. Mechanical Drawing. Two credit hours. Either semester.

131-132. The Teaching of Mechanical Drawing. Three credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT, GRAVES AND KETCHAM,
ASSISTANT PROFESSORS COOPER, BECK, ANDREWS AND PER-
CIVAL, MR. CRAIG, MR. DISHONG, MR. WILEY, MISS
ROBINSON, MR. FOLEY, MISS DOLLINGER, MR.
GYSAN, AND DEPARTMENT ASSISTANTS

101. Paragraph Writing: Description and Narration. Two credit hours. Either semester. All instructors.

Text: Scott and Denney's Paragraph Writing, and Duncan, Beck and Graves's Specimens of Prose Composition.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session.

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisite, English 101, 104. Mr. Beck, Mr. Dishong.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisite, English 101, 104, 105. Mr. Beck, Mr. Dishong.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisite, English 101, 104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

108. Advanced Composition. Two credit hours. Second semester. Prerequisite, English 101, 104. The number admitted to this course is limited to thirty. Special permission necessary. Mr. Graves.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Text-book: Greenough and Kittredge's Words and their Ways in English Speech.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves, Mr. Andrews.

Second semester: Mr. Cooper, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant and Poe; of Hawthorne, Emerson, Whittier, Longfellow and Lowell; and of Walt Whitman; with a brief survey of recent literature.

141. Nineteenth Century Poetry. Three credit hours. First semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Wordsworth, Shelley, Keats, and their contemporaries.

142. Nineteenth Century Poetry. Three credit hours. Second semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris and Meredith.

145. Nineteenth Century Prose. Three credit hours. First semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Coleridge, Lamb, Landor, DeQuincy, Hazlitt and Carlyle.

146. **Nineteenth Century Prose.** Three credit hours. Second semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

136. **Eighteenth Century Poetry and Prose.** Three credit hours. Second semester. Prerequisite, ten hours of English. Mr. Percival.

After some consideration of the classical poetry of Pope and his contemporaries, the development of romantic poetry is studied in the works of Thomson, Gray, Collins, Burns, Goldsmith, Cowper, Blake, Crabbe and others.

137. **The Life and Times of Dr. Johnson.** Three credit hours. First semester. Prerequisite, English 136. Mr. Percival.

A study of the life of Dr. Johnson, and of the manners and currents of opinion of his time, based principally on Boswell's Life of Johnson supplemented by readings in the Letters of Horace Walpole, the Journal of John Wesley, and various essays on eighteenth century topics.

157. **Versification.** Three credit hours. First semester. This course is limited to thirty members. Open only to juniors and seniors. Special permission necessary. The course should be preceded by a year-course in poetry. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

159. **Milton and his Contemporaries.** Two credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Andrews.

The belles-lettres of the Puritan Revolution.

160. **The Age of Dryden.** Two credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Andrews.

167. **Shakespeare: Histories and Tragedies.** Three credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Denney.

168. Shakespeare: Comedies and Romances. Three credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Denney.

*175-176. American Literature. Two credit hours. The year. Prerequisite, ten hours in English. Mr. Taylor.

Not open to those who have credit for English 133.

181. The Teaching of English. Two credit hours. First semester. Prerequisite, ten hours in English. Mr. Denney.

FOR GRADUATES

201. History of the Short Narrative in English.

202. The Lyric.

204. The College Teaching of English.

205. History of Critical Theory.

*206. Problems in the Drama.

207. The Later Novel.

208. The Later Poetry.

209. English and Scottish Popular Ballads.

*210. English Usage.

212. The Celtic Renaissance.

213. The Technique of the Modern Drama.

214. The Technique of the Drama.

215-216. Studies in Seventeenth Century Literature.

217-218. Studies in Eighteenth Century Literature.

219-220. Discussion of Dissertations.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING

101. Public Speaking. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Wiley.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

*Not given in 1919-1920.

102. Debating. Two credit hours. Second semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Wiley.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

107-108. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, consent of the instructor. Mr. Ketcham.

A study of great political and legal debates. Special applications of logic to argument. Practice in drawing briefs and presenting oral arguments on political and legal problems.

110. Advanced Debate Practice. Two credit hours. Second semester. Two practice periods each week. Prerequisite, consent of the instructor. Mr. Ketcham.

An advanced course for students showing special ability in debate.

114. Extempore Speaking. Two credit hours. Second semester. Prerequisite, Public Speaking 102. Mr. Wiley.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

121-122. Masters of Public Address. Two credit hours. The year. May be taken with Public Speaking 101 and 102, but may not precede them. Given biennially. Mr. Ketcham.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment, and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry, Webster, Clay, Calhoun, Lincoln, Beecher and Phillips. Lectures, readings and reports.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisite, Public Speaking 101-102. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different

forms of public address. Formal orations; inaugurals; nominating speeches; after dinner speaking; discussions of current events; political, business and social addresses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***151-152. Special Problems in the Theory of Public Speaking.** Two credit hours. The year. Prerequisite, Public Speaking 101-102 and four additional credit hours in public speaking. Given biennially. Mr. Ketcham.

The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals and aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

EUROPEAN HISTORY

Office, 204 University Hall

PROFESSORS SIEBERT, McNEAL, AND PERKINS, ASSISTANT PROFESSORS HARRIS AND WASHBURNE, MR. KNIPFING

101. Medieval History. Three credit hours. First semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris, Mr. Washburne, Mr. Knipfing.

102. Modern History from 1500 A. D. Three credit hours. Second semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris, Mr. Washburne, Mr. Knipfing.

European History 101 is given also during the second semester.

European History 102 is given also during the first semester.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third and fourth year students. Mr. Perkins, Mr. Harris.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

*Not given in 1919-1920.

105. History of Greece. Three credit hours. First semester. No prerequisite for second, third and fourth year students. Mr. Knipfing.

106. History of Rome. Three credit hours. Second semester. No prerequisite for second, third and fourth year students. Mr. Knipfing.

***119-120. History of Germany.** Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

121-122. History of France. Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

131-132. The World War: its Causes, Issues, and Results. Three credit hours. The year. Not open to first year students. Mr. McNeal, Mr. Hockett, Mr. Wittke, Mr. Washburne.

This course deals with the remote and immediate underlying causes of the great war, the issues involved among the nations, with special emphasis on the relation of the United States to the conflict, the problems and issues in its settlement, and the consequent national and international reconstruction.

While not required it is suggested that a collegiate course in European history, or American history or political science may with advantage precede this course.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107-108. Medieval Civilization. Two credit hours. The year. Prerequisite, European History 101, 102. Mr. McNeal.

Advanced students from other departments admitted without this prerequisite on consent of instructor.

First semester, the culture produced by feudal society; second semester, the culture produced by the church.

*Not given in 1919-1920.

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisite, European History 101, 102. Mr. Siebert.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisite, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

123-124. Europe from 1815 to 1919. Three credit hours. The year. Prerequisite, European History, 101, 102. Mr. Perkins.

The history of central and western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. History of the Church in Western Europe. Two credit hours. The year. Prerequisite, European History 101, 102. Advanced students from other departments admitted without the prerequisite. Mr. Harris.

129-130. Historical Literature and Method. Two credit hours. The year. Two lectures each week. Prerequisite, European History 101-102, and at least one other year course in the department. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Harris, Mr. Knipfing.

An introduction to the chief sources for the various divisions and periods of European history, and a characterization of the principal secondary authorities. Exercises in historical bibliography and method. Designed for students specializing in European history.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert, Mr. Perkins.

This course will most naturally be taken as a continuation of American History 121 (Teachers' Course), the two semesters forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History 101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

FOR GRADUATES

203-204. Seminary in Modern European History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FARM CROPS

Office, 101 Horticulture Building

PROFESSOR PARK, ASSISTANT PROFESSOR WILLARD,
AND DEPARTMENT ASSISTANTS

101. Field Crop Production. Four credit hours. Either semester. Prerequisite, Botany 101 or its equivalent.

A study of the history, adaptation, distribution, and classification of the cereal crops, and the cultivation, harvesting, and marketing of the same throughout the great agricultural sections of the world, with especial attention given to Ohio conditions.

FRENCH

(See Romance Languages)

GEOLOGY

Office, 104 Orton Hall

PROFESSORS BOWNOCKER AND CARMAN, ASSISTANT PROFESSORS
HILLS AND TUCKER, MR. BEVAN, MISS MORNINGSTAR

101-102. Physiography. Three credit hours. The year. Open to freshmen and sophomores only. Mr. Bownocker, Mr. Hills, Mr. Tucker, Mr. Bevan.

Three field trips are made Saturdays in each semester, each

trip taking the place of a recitation. During three months the Monday recitation is replaced by laboratory work.

Physiographic features of the earth's surface; the ocean, and the atmosphere. Recitations, lectures and assigned readings, illustrated with models and lantern views.

103. Inorganic Geology. Three credit hours. First semester. Mr. Bownocker.

Introductory course. Petrographical, structural and dynamical geology. Study of common minerals and rocks and geological maps. The course is illustrated with lantern views, models, and museum materials.

104. Historical Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103. Mr. Carman.

A general course in paleontological and stratigraphical geology, illustrated by lantern views, maps and specimens. The development of organisms and the classification and distribution of geological formations, especially those of Ohio, are considered. After the first of April, some of the Friday lectures will be replaced by field trips on Saturdays.

Geology 101 or 103, and 104 are considered prerequisites for advanced work in physiography, historical or inorganic geology.

121. Introduction to Geography. Three credit hours. First semester. Lectures, assigned reading and laboratory. Prerequisites, Geology 101-102 or 103-104. Mr. Tucker.

The fundamental principles of geography. An introductory study of the relation of the lithosphere, hydrosphere and atmosphere to life, especially the life of man.

122. Geography of North America. Three credit hours. Second semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

North America in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the North American people.

124. Physical and Regional Geography of Europe. Three credit hours. Second semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

Europe in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the European people. Offered in 1920-1921.

125. Geography of Asia. Three credit hours. First semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

Asia in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the Asiatic people, especially the people of India, China, Japan and Siberia. Offered in 1920-1921.

128. The Teaching of Geography. Three credit hours. Second semester. Lectures, assigned reading, laboratory and field work. The field work will replace laboratory when given. Mr. Tucker.

The subject matter of geography will be used to develop appropriate methods of teaching the subject in the elementary and secondary schools.

NOTE: Additional courses in geography may be found listed in the department of Economics and Sociology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Field Geology. Three to five credit hours. First semester. Prerequisite, Geology 101 or 103-104. Mr. Carman.

Lectures, assigned readings, field trips and laboratory work. Field trips generally on Saturdays while the weather permits, laboratory work for the remainder of the semester.

A study of the geological formations readily accessible from Columbus, and the identification of fossils characteristic of different formations. This course is intended to acquaint the student with the ordinary methods of field investigation, and involves the collection and identification of specimens, the measurement of geological sections, and the preparation of a report describing the region studied. Occasionally, longer geological excursions will be arranged.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103 and 104. Mr. Hills.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned readings and map work. The second half, largely to field work and the preparation of reports, the field work being on Saturdays.

111. Physiography of Central Ohio. Three credit hours. First semester. Prerequisite, Geology 101-102, and 103-104, or 103-104 concurrent. Mr. Hills.

Three field trips each week while the weather permits; assigned reading and written reports during the winter.

Field and laboratory course.

116. Physiographic Geology. Three credit hours. First semester. Prerequisite, Geology 101-102 and 103-104. Mr. Hills.

Intensive study of physiographic principles, processes and agents, with an application to certain type regions of the United States. Occasional field trips.

175-176. The Teaching of Physiography. Two credit hours. The year. Prerequisite, Geology 101-102, 104, 106, and 111, or an equivalent. Mr. Hills.

Lectures, readings, conferences, and reports. Sources and selection of materials; use of maps, globes and other representative materials; the excursion; preparation of type studies; correlation of topics; and discussion of the general course, with other topics of practical importance to the teacher of physical geography.

FOR GRADUATES

201-202. Advanced Historical Geology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317-318 University Hall

PROFESSORS M. B. EVANS AND EISENLOHR, ASSISTANT PROFESSORS THOMAS, BARROWS AND BUSEY, MR. KOTZ

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic and practice courses. The linguistic and

practice courses are intended primarily for students who desire to make direct professional use of the language. For students who enter with two years of German and who desire to major in German the following outline course is recommended:

First year: 103-104.

Second year: 115-116 or 107-108 and 131-132.

Third year: 117-118 or 175, and one literary course in the group Advanced Undergraduates and Graduates.

Fourth year: at least one literary course in the group Advanced Undergraduates and Graduates, 171-172, 173, 177-178.

German 107 to 118 require as prerequisites German 104 or its equivalent. German 115-116, offering a considerable amount of intensive oral and written work is especially recommended for students desiring to take German as a major subject. A combination of German 131-132 with German 107-108 is advised. No student may elect more than two year-courses in the group 107-108.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 102 is given also during the first semester.

German 101 is given also during the second semester.

103. Intermediate German. Four credit hours. Either semester. Prerequisite, German 101-102 or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose and a classical drama supplemented by discussions of syntax; prose composition.

German 103 is given also during the second semester.

104. Easy Classical Reading and Composition. Four credit hours. Either semester. Prerequisite, German 103 or three entrance units in German. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

German 104 is given also during the first semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, and

sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year. Open only to freshmen with four entrance units in German. Mr. Busey.

A rapid reading course. First semester: Nineteenth Century Novel. Second semester: Nineteenth Century Drama.

115-116. Classical and Modern Writers. Three credit hours. The year. Mr. Kotz.

Selections from the 18th and 19th century writers; written and oral exercises. To be conducted in German.

117-118. Schiller: Introduction to Life and Works. Two credit hours. The year. Miss Thomas.

First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Kreig.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Eisenlohr.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: At least one year course in the group 107 to 118 or the equivalent.

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

†151-152. Goethe: Introduction to Life and Works. Three credit hours. The year. Mr. Evans.

First semester: Selections from lyrics, early dramas and prose. Second semester: Faust.

***153-154. Survey of German Literature.** Three credit hours. The year. Mr. Evans.

*Not given in 1919-1920.

†Second semester only, given in 1919-1920.

Lectures, interpretation of selected texts and parallel readings. First semester: From the beginning to Lessing. Second semester: Classical period and nineteenth century.

***155-156. Lessing: Introduction to Life and Works.** Two credit hours. The year. Mr. Eisenlohr.

First semester: Dramas. Second semester: Critical writings, to be conducted in German.

***157. Volkslied.** Two credit hours. First semester. Mr. Eisenlohr.

Studies in the origin and growth of the German folksong with special reference to German life and culture. To be conducted in German.

***158. Volksbuecher, Maerchen, und Sagen.** Two credit hours. Second semester. Mr. Eisenlohr.

Studies in popular and legendary literature. To be conducted in German.

159. Heine: Introduction to Life and Works. Two credit hours. First semester. Mr. Evans.

***160. Hebbel: Introduction to Life and Works.** Two credit hours. Second semester.

***161-162. Romantic Writers.** Two credit hours. The year. Miss Thomas.

Lectures on the Romantic Movement with the reading of representative texts. First semester: Selections from Novalis, Tieck, Arnim. Second semester: Selections from Eichendorff, Uhland, Hoffmann.

***171-172. Advanced Prose Composition.** Two credit hours. The year. Open only on consent of instructor. Mr. Eisenlohr.

***173. The Teaching of German.** Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports and practice teaching. Open only to seniors and graduate students.

*Not given in 1919-1920.

***174. Grammar Review.** Two credit hours. Second semester. Mr. Evans.

A detailed discussion of theoretical grammar from the standpoint of the high school teacher. Open only to seniors and graduate students.

175. Phonetics. Two credit hours. First semester. No prerequisites. Not open to first and second year students. Miss Barrows.

Speech sounds with special reference to German, French and English.

176. Interpretative Reading. Two credit hours. Second semester. Miss Barrows.

Practice in reading German; narrative and dramatic prose and verse. Not open to graduate students for credit.

***177. Middle High German.** Two credit hours. First semester. Mr. Busey.

Introductory course. Grammar and selected readings.

***178. History of the German Language.** Two credit hours. Second semester. Mr. Busey.

Lectures and illustrative readings, with special reference to the needs of those intending to teach.

181-182. Minor Investigation. Two credit hours. The year. Prerequisite, at least two year-courses in the group for advanced undergraduates and graduates. Mr. Evans, Mr. Eisenlohr, Miss Thomas, Miss Barrows, Mr. Busey.

Investigation of minor problems in the various fields of German literature and philology.

FOR GRADUATES

201-202. Advanced Middle High German.

***203. Gothic.**

***204. Old High German.**

***212. Methodology.**

*Not given in 1919-1920.

214. Experimental Phonetics.

215-216. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities.

123-124. Life and Literature of the Greeks. Two credit hours. The year. No prerequisite. Mr. Bolling.

Lectures on private life; on epic, lyric and dramatic poetry; on the historians, the philosophers and orators.

*127-128. Proseminary in Greek. Two credit hours. The year. Elective. Prerequisites, one year of elementary Greek, and the equivalent of at least four semester courses of college Greek. Mr. Bolling.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Thucydides and Demosthenes. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

Thucydides: Book I or Book VII. Demosthenes: Olynthiacs.

110. Demosthenes and Theocritus. Two credit hours. Second semester. Prerequisite, Greek 125-126. Mr. Bolling.

Demosthenes: Philippics. Theocritus: Selections.

111. Attic Drama. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

Euripides: Alcestis. Sophocles: Oedipus Tyrannus, with lectures on scenic antiquities.

*Not given in 1919-1920.

112. Attic Drama. Two credit hours. Second semester. Prerequisite, Greek 125-126. Mr. Bolling.

Continuation of Greek 111, two plays.

113. Epic Poetry and Aristophanes. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

Epic Poetry: Selections. Aristophanes: The Birds.

114. Aristophanes and Post-Classical Greek. Two credit hours. Second semester. Prerequisite, Greek 125-126. Mr. Bolling.

Aristophanes: The Clouds. Post-Classical Greek: Lucian.

119. Readings in Greek Philosophy. Two credit hours. First semester. Prerequisite, Greek 125-126. Mr. Bolling.

120. Studies in New Testament Greek. Two credit hours. Second semester. Prerequisite, Greek 125-126. Mr. Bolling.

121-122. Historical Greek Grammar. Two to four credit hours, according to the needs of applicants. The year. Mr. Bolling.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not pre-suppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

Courses 115-116, 121-122, 123-124, are planned to meet the needs of students who have no knowledge of Greek.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 100 Hayes Hall

PROFESSOR ANDERSON, MR. MARINO

101-102. History of Education. Three credit hours. The year. Prerequisite, one year's work in European history, philosophy or psychology. Mr. Anderson.

Text: Graves's A History of Education (three volumes).

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102 and Philosophy 151-152. Mr. Anderson.

105-106. **Educational Classics.** Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102. Mr. Anderson.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel and Spencer. Reports and conferences.

107-108. **Comparative Education.** Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England and the United States.

109-110. **History of Education in the United States.** Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

112. **History of Industrial Education.** Two credit hours. Second semester. Prerequisite, History of Education 101-102 or equivalent. Open to seniors and graduates only. Mr. Anderson.

FOR GRADUATES

201-202. **Seminary in the History of Education.**

203-204. **Seminary in Educational Philosophy.**

206. **A Special Survey of Source Materials and of General Literature in the Field of the History of Education.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 120 Home Economics Building

PROFESSORS WHITE AND VAN METER, ASSISTANT PROFESSOR HATHAWAY, MRS. WALKER, MISS TUCKER, MISS SKINNER, MISS LINDER, MRS. ADAMS, MISS KAUFFMAN, MISS GROMME, MISS MacCONATHY, MISS HESSE, MISS MILLER, AND DEPARTMENT ASSISTANTS

101-102. **Foods.** Five credit hours. The year. Two lectures, one quiz and two laboratory periods each week. Pre-

requisite, Chemistry 106 or 110. Miss White, Miss Hesse, Miss Junkermann, Miss Hays.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost and value of the nutrients in the various food materials.

104. Sanitation. Three credit hours. Either semester. Three lectures each week. Prerequisite or concurrent, Bacteriology 107. Miss Linder.

A study of the interdependence of home and public agencies in securing and promoting sanitary and hygienic measures; location and construction of the house, water supply, plumbing, heating, ventilation, lighting, and home nursing.

111-112. Textiles. Two credit hours. The year. One lecture and one laboratory period each week. Prerequisite or concurrent, Art 119. Mrs. Walker, Miss Tucker, Miss De Vere.

The study of fibres and fabrics from a historic, economic and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs, and a comparison with commercially prepared articles.

Students having had previous work should consult with the instructor.

113. Dress. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Home Economics 111-112 and Art 121 prerequisite or concurrent. Miss Hathaway, Miss Miller.

A study of the relation of economics, hygiene, and art to clothing. The drafting and designing of patterns, the selection of materials, and garment construction.

116. Dress. Three credit hours. Second semester. One lecture and two laboratory periods each week. Miss Hathaway, Miss Miller.

Continuation and amplification of Home Economics 113.

Outline of history of costume and continuation of the study of selection and combination of materials in their application to dress.

The lecture may be taken as a one-hour course without the laboratory.

118. **The House.** Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Art 131, Home Economics 112. Home Economics 104, Economics 101, Art 141, either prerequisite or concurrent. Miss Tucker.

A study of the evolution of the house and the principles underlying house arrangement, furnishing and decoration.

119. **The House.** Three credit hours. Either semester. Three lectures each week. Continuation of 118. Prerequisites, Economics 102, Art 141, Home Economics 102, 118, 104, or 110. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

The Home Economics practice apartment where the students live in groups for a period of time, affords opportunity for practice in household management.

121. **Food Problems.** Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisites, Chemistry 106 or 110, Home Economics 101-102 and consent of the instructor. Miss Skinner.

Problems of markets, fuels, equipment and labor involved in selection, purchase, preparation and service of food.

108. **Teaching of Home Economics.** Two credit hours. Second semester. Two lectures each week. Prerequisites, Home Economics 101-102, 111-112, Psychology 101. Miss Van Meter, Miss Hathaway, Mrs. Adams.

This course is designed for students intending to teach home economics. Survey of home economics, examination of courses of study, lesson plans and study of various types of schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. **Proseminary.** Two to five credit hours. First semes-

ter. One lecture each week. Prerequisite, eighteen hours of required home economics work. Miss Van Meter.

Readings and reports on home economics topics. Problems assigned for individual research.

106. **Proseminary.** Two to five credit hours. Second semester. One lecture each week. Continuation of Home Economics 105. Prerequisite, Home Economics 105 and consent of the instructor. Miss Van Meter.

Special research continued. Reports and conferences.

110. **Dietetics.** Four credit hours. Either semester. Two lectures and two laboratory periods each week. Prerequisites, Home Economics 101-102, Physiology 101-102, Agricultural Chemistry 123-124. Miss Skinner.

A study of the chemical, physiological and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Translation of standard dietaries into food materials and some exercise in making dietary studies and in preparing food for the sick.

FOR GRADUATES

201-202. **Research Course.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

HORTICULTURE AND FORESTRY

Office, 118 Horticulture Building

PROFESSORS PADDOCK AND MONTGOMERY, ASSISTANT PROFESSORS SCHERER, ELWOOD, HOTTES, AND ALLEN, MR. CHARLES,
AND DEPARTMENT ASSISTANTS

HORTICULTURE

101. **Principles of Horticulture.** Four credit hours. First semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if the student has already passed Horticulture 118.

A study of plant growth with special reference to orchard,

garden, greenhouse and nursery practice. The methods of plant propagation are studied in detail.

120. Small Fruits and Grapes. Four credit hours. Second semester. Three lectures and two laboratory hours each week. Required in the third year of the curriculum in Agricultural Education. Credit cannot be received for this course if Horticulture 118 has been passed. Prerequisite, Horticulture 101.

History, botany, geography, site and soil for plantation, planting, cultural practices, harvesting, marketing and cost of accounting.

156. Landscape Architecture. Two credit hours. Second semester. Mr. Elwood, Mr. Allen.

A general study of the underlying principles of landscape architecture. This course is open to the general student-body and is supplemented by discussions from outside lecturers, who have made a special study of different phases of this profession. The practical application of the principles of landscape architecture will be covered as they relate to the development of public and private properties including farms, country estates, gardens and parks.

FORESTRY

184. Principles of Forestry. Three credit hours. Second semester. Three lectures with occasional recitations. Elective. Mr. Scherer.

This course is intended as a bird's-eye view of the objects and purposes of forestry; the problems it has to solve; the conditions necessary for its success; the materials with which it has to work and the technical terms peculiar to it,—all serving to introduce the student to a broad glimpse of the profession. It is planned to acquaint the student with the conditions necessary for tree growth; the factors influencing the distribution of forests; different types of forests; distribution of forests over the world; the exploitation and yield in different forest products and their relative importance.

Adapted to students of other departments.

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS DERBY, HODGMAN, AND ELDEN, MR. DUNLAP

147. Elementary Latin. Four credit hours. First semester. Mr. Dunlap.

Grammar and exercises. This course is offered to students who have not studied Latin.

148. Elementary Latin. Four credit hours. Second semester. Prerequisite, Latin 147. Mr. Dunlap.

Caesar, four books and exercises.

149. Cicero, Orations. Four credit hours. First semester. Prerequisite, Latin 147-148 or their equivalent. Mr. Dunlap.

150. Vergil, Aeneid. Four credit hours. Second semester. Prerequisite, Latin 147-149 or their equivalent. Mr. Dunlap.

101. Cicero, Livy, Horace, Aulus Gellius. Four credit hours. First semester. Prerequisite, four units of preparatory Latin. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Cicero: De Senectute and De Amicitia; Livy; Horace: Odes; Aulus Gellius: Selections.

102. Horace, Ovid, Livy, Sallust. Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden, Mr. Dunlap.

Horace: Odes; or Ovid: Metamorphoses; Livy or Sallust, or Prose Composition.

103. Pliny or Cicero; Catullus or Tacitus. Three credit hours. First semester. Prerequisite, Latin 101-102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: Selected letters. Catullus or Tacitus.

104. Latin Comedy. Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. Roman Satire. Two credit hours. First semester. Prerequisite, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

106. **Roman Philosophy and Rhetoric.** Two credit hours. Second semester. Prerequisite, Latin 101 to 104. Mr. Elden. Cicero and Quintilian.

107-108. **Roman Private Life.** One credit hour. The year. Prerequisites, Latin 101, 102. Mr. Derby.

111-112. **Roman and Comparative Literature.** One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany and England.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. **Roman Art and Archaeology.** One or two credit hours. The year. Mr. Derby.

The course is open to undergraduates excepting freshmen, and to graduates.

The development of the arts and crafts in early Italy, and especially of Roman architecture, sculpture, wall decoration, mosaic, gems and pottery. It is open not only to students of Latin, but also to other students who are interested in the subject.

113-114. **Proseminary.** Three credit hours. The year. Prerequisite, Latin 101-104. Mr. Elden.

115-116. **Latin Prose Composition.** Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. Advanced Latin Composition. One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman. Translation of English narrative and study of Latin idiom.

121. Roman Prose Authors. Two credit hours. First semester. Mr. Derby, Mr. Hodgman, Mr. Elden. Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Sounds and inflections. Pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Elden.

Syntax. Lectures on the problems connected with the origin and development of certain construction in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes, and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned reading on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of textbooks; preparation of lessons; conduct of recitations; equipment, bibliography of books of reference, periodicals, etc.; illustrative exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

130. Practice in Reading at Sight. Two credit hours. Second semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Instruction and practice in reading at sight, reports, topics for investigation and other pertinent work.

131-132. Roman Public Life. One or two credit hours. The year. Prerequisite, Latin 103-104 or European History 106. Mr. Dunlap.

A brief survey of the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

FOR GRADUATES

201-202. Roman Religion.

203-204. Medieval Latin.

***207-208. Seminary.**

213-214. Elements of Epigraphy and Palaeography.

***215-216. Roman Antiquities and Archaeology.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Office, 212 Shops Building

PROFESSOR USRY, MR. SMITH

112. Materials, Methods, and Equipment. Three credit hours. Second semester. Industrial Education, fourth year.

*Not given in 1919-1920.

Organization, equipment and its care; supplies, courses of study, methods of presentation of subject, general procedure.

117-118. Constructive Design. Two credit hours. The year. Industrial Education, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of material to project. These problems will cover work in the upper elementary grades and the secondary school.

121-122. Handwork for Supervisors. Two credit hours. The year. These courses should not be taken before the third year. Art 119, 131, 141, prerequisite or concurrent.

For elementary school supervisors of drawing, home economics, and manual training, suggesting means of correlating these subjects with the elementary school subjects.

Work in basketry, weaving, elementary woodwork, clay and various other mediums of expression is made use of in suggesting the correlation.

Assigned reading and discussions along with the construction work.

125. Elementary Woodwork. Two credit hours. Second semester. Industrial Education, first year. Mr. Usry, Mr. Smith. Formerly Shopwork 133.

127-128. Wood Turning and Pattern Making. Three credit hours. The year. Prerequisite, Industrial Education 125. Industrial Education, second year. Mr. Usry, Mr. Smith.

Formerly Shopwork 129-130.

129. Cabinet Making. Two credit hours. Either semester. Prerequisite, Industrial Education 125. Industrial Education, third year. Mr. Usry, Mr. Smith.

Formerly Shopwork 113.

131. Advanced Cabinet Work. Three credit hours. First semester. Prerequisite, Industrial Education 129. Optional, Industrial Education, fourth year. Mr. Usry, Mr. Smith.

Formerly Shopwork 131.

111. Teaching of Manual Training. Three credit hours. First semester. Industrial Education, fourth year.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up its strength. Point of view in industrial and vocational education; the part-time, cooperative, and trade school; night and continuation schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. Special Problems in Manual Training. Two credit hours. Either semester. For superintendents and principals. Mr. Usry.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, costs, selection of teachers, salaries, and ways to help the teacher in service. Open to seniors or graduates, or to men of experience acceptable to the instructor.

ITALIAN

(See Romance Languages)

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOARD, SWARTZEL, KUHN, RASOR, AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT PROFESSORS PRESTON, BAREIS, AND RIETZ, MISS RICKARD, MR. WEAVER, MR. BEATTY

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German and Italian by the beginning of the junior year, and to take some courses in philosophy, particularly logic, in the junior and senior years.

121. College Algebra and Trigonometry. Three credit hours. First semester. Mr. Swartzel, Mr. Arnold.

122. Plane Trigonometry and Analytical Geometry. Three credit hours. Second semester. Mr. Swartzel, Mr. Arnold.

125-126. History of Elementary Mathematics. Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. Analytical Geometry and Calculus. Three credit hours. The year. Prerequisites, Mathematics 122 or 132. Mr. Kuhn.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisite, entrance algebra and geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122, or 132. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: Differential and Integral Calculus.

***163-164. Plane and Solid Analytical Geometry.** Three credit hours. The year. Miss Bareis.

165-166. Advanced Calculus. Three credit hours. The year. Mr. Morris.

167-168. Differential Equations. Three credit hours. The year. Mr. Bohannon.

171-172. Projective Geometry. Three credit hours. The year. Miss Bareis.

*Not given in 1919-1920.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

186. The Teaching of Mathematics. Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions and practice teaching.

FOR GRADUATES

201-202. Theory of Functions of a Complex Variable.

203. Fourier's Series and Spherical Harmonics.

204. Vector Analysis and its Applications.

205-206. Calculus of Variations.

207. History of Mathematics.

209-210. Theory of Statistics.

211-212. Groups.

213-214. Differential Geometry.

215-216. Functions of a Real Variable.

217-218. Infinite Series and Products.

219-220. Theory of Numbers.

221-222. Theory of Invariants.

For description of graduate courses in this department see the Bulletin of the Graduate School.

MILITARY SCIENCE AND TACTICS

Office, 104 Hayes Hall

LIEUT. COLONEL LEONARD, U. S. A., CAPTAIN HALSTEAD, U. S. A.,
SERGEANTS MADDEN AND O'ROURKE, MR. BRUDER

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees, therefore, requires all male students, both

special and regular, unless excused by the Military and Gymnasium Board, to drill during two years. This work is under two commissioned officers of the regular army, detailed for the purpose. The Military Department is open during five days each week throughout the year.

1. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring) military drill; four months, three hours each week (winter) of class-room instruction in drill regulations. Target practice at any open hour during the afternoon of the winter months, at 100, 200, and 300 yards. Lecture, one hour each week by the President, upon topics of common interest to the student body.

2. **Military Drill.** One credit hour. Five months, three hours each week (divided between fall and spring), in extended order and guard duty. Four months, three hours each week (winter) of class-room instruction in articles of war, guard manual, and field service regulations. Target practice, at any open hour of the afternoon of the winter months, at 500, 600, and 800 yards.

PHILOSOPHY

Office, 321 University Hall

PROFESSOR LEIGHTON, ASSISTANT PROFESSORS CHANDLER
AND AVEY, MR. WILLIAMS

101. **Introduction to Philosophy.** Three credit hours. Either semester. Open to first year students. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state and religion.

102. **Introductory Logic.** Three credit hours. Either semester. Prerequisite for first year students, Philosophy 101. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams.

A practice course in the methods of correct thinking.

105. **Elementary Ethics.** Three credit hours. First semester. Not open to first year students. Mr. Chandler, Mr. Williams.

An introductory study of the chief theories of the moral life.

106. Elementary Ethics: History of Moral Ideas and Practices. Three credit hours. Second semester. Not open to first year students. Mr. Chandler, Mr. Williams.

A historical study of the chief stages in moral evolution—tribal morality, the moral ideas of the ancient Hebrews and Greeks, medieval society, and modern industrialism.

115-116. Esthetics. Two credit hours. The year. Not open to first year students. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

107. History of Ancient and Medieval Philosophy. Three credit hours. First semester. Not open to first year students. Mr. Chandler, Mr. Avey.

The development of Greek philosophy; early Christian philosophy, the medieval schools.

108. History of Modern Philosophy. Three credit hours. Second semester. Not open to first year students. Mr. Chandler, Mr. Avey.

The development of modern philosophic thought from Francis Bacon and Descartes to Charles Darwin and Herbert Spencer.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***119. Philosophy of Religion.** Three credit hours. First semester. Prerequisite, one year's work in philosophy, psychology or history of religion. Mr. Leighton.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

121-122. Metaphysics. Three credit hours. The year. Prerequisites, at least one year's work in philosophy and in psychology or a natural science. Mr. Leighton.

*Not given in 1919-1920.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality and theism.

123-124. Representative Ancient Philosophers. Three credit hours. The year. Prerequisite, one year in philosophy and one year in a related subject. Mr. Chandler.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

***125-126. Representative Modern Philosophers.** Three credit hours. The year. Prerequisite, one year in philosophy and one year in a related subject. Mr. Chandler.

Selected works of Leibniz, Hume, Kant and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

134. Political and Social Philosophy. Three credit hours. Second semester. Prerequisite, either Philosophy 105 or 107-108, or Political Science 115-116, or Sociology 101-102. Mr. Leighton.

The ethical values and aims involved in social institutions and their evolution, with especial reference to the state, the family, economic activities, and education; an examination of the ethical and metaphysical problems involved in the relation of the individual to society, and the philosophy of history.

***142. The Main Currents in Contemporary Philosophy.** Three credit hours. Second semester. Prerequisites, Philosophy 101, 105-106, 107 or 108. Mr. Leighton.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science and social movements.

***146. Philosophy of History.** Three credit hours. First semester. Prerequisite, any two of Philosophy 101, 105, 106, 111, 134, 107, 108, and one year's work in European History. Mr. Leighton.

*Not given in 1919-1920.

A critical examination of the principal theological and philosophical theories of the meaning of history and human progress in the light of ethics and the philosophy of values, with a view to arriving at correct conceptions of the meaning of history and the fact and nature of progress, especially ethical and intellectual progress. The theories dealt with will be chiefly those of the Church fathers, of the German philosophers from Lessing to Nietzsche, Dilthey, Windelband, Rickert, Simmel and Eucken; and of Comte, Spencer, Buckle, Carlyle, and contemporary English and American thinkers. Intended for students of literature, history, politics and sociology.

150. Pragmatism. Two credit hours. Second semester. Prerequisite, either Philosophy 101, 107 or 108. Mr. Williams.

An account and critical estimate of the movement known as pragmatism and its later form, instrumentalism, with special reference to the work of William James, F. C. S. Schiller, and John Dewey.

153-154. American Philosophy. Two credit hours. The year. Prerequisite, Philosophy 107-108. Mr. Avey.

The history of American philosophy, with especial reference to some of its classic thinkers, such as William Penn, Jonathan Edwards, Benjamin Franklin, Ralph Waldo Emerson, William James, Josiah Royce, John Dewey, and others; with a study of the relation of American to European philosophy; an interpretation of the spirit of America.

FOR GRADUATES

201-202. Seminary in Philosophy.

207-208. Contemporary Philosophical Issues.

209-210. Discussion of Current Philosophical Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION**MEN**

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE, CASTLEMAN, AND NICHOLS,
ASSISTANT PROFESSOR TRAUTMAN, MR. OHLSON, MR. BIRD

Students in the College of Education may take courses in physical education as a minor—twelve semester hours, in addition to the required courses 101-102 (men) or 131-132, 133-134 (women)—on the approval, in each case, of the Head of the Department of Physical Education and the Dean of the College.

Juniors and seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than six semester hours. In each case the approval of the Head of the Department and the Dean of the College of Education is necessary.

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of all first year students in this college. During the first semester the course consists of one lecture on personal hygiene and one period of active physical exercise each week.

Personal Hygiene: Lectures and quizzes on the cause, prevention, and hygienic treatments of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of the student.

Physical Exercise in Class: A graded course of free-hand exercises, with light hand apparatus for the relief and correction of slight bodily defects, improper carriage; graded progressive exercises to promote muscular tone, organic vigor, bodily skill; class dancing, gymnastic and athletic games and contests.

107. Organization and Administration of Physical Education in Secondary Schools. Two credit hours. First semester. Elective. Mr. St. John, Mr. Wilce, Mr. Castleman.

Consideration of problems of organization for general intramural physical activity. Organization, administration, and control of competitive athletics.

110. Theory of Physical Education. Two credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

111. Principles of Coaching Track and Field Sports. One credit hour. First semester. Mr. Castleman.

Instruction and practical demonstration in the usual track and field events. A study of the rules and scoring methods. The management of meets. Problems of training. Adaptation of track and field events to large group contests.

112. Principles of Coaching Football. One credit hour. Second semester. Mr. Wilce.

A consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, pedagogy and methods of coaching. Laboratory will consist of field work and observation under direction.

113. Principles of Coaching Baseball and Basketball. One credit hour. First semester. Mr. St. John.

A study of batting, base running, playing all positions, methods of coaching. A course in fundamentals. Basketball: a study of individual and team play, offensive and defensive, practice methods. A knowledge of the rules of baseball and basketball is a prerequisite.

120. Anthropometry and Physical Diagnosis. Two credit hours. Second semester. Elective. Prerequisite, Physiology 101-102. Mr. Castleman, Mr. Nichols.

Theory of taking and keeping records of physical history of students. Anthropometric measurements. Preliminary examination of eye, ear, nose, throat, lungs, heart, back, feet, with interpretation of knowledge obtained.

122. Teaching of Physical Education. Two credit hours. Second semester. Elective. Prerequisites, Physiology 101-102, Psychology 101-102, and previous satisfactory physical training. Mr. Nichols.

One hour theory of teaching and two hours practice of gymnastics, calisthenics, and general floor work and handling of squads.

125. Hygiene and First Aid. Two credit hours. First semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

A study of the basic principles of health and their application in personal hygiene with particular reference to physical education. Principles and methods of first aid, emphasizing conditions arising in connection with physical education.

The above courses are open to third and fourth year students on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

WOMEN

ASSISTANT PROFESSOR MEYER, MISS HAMMETT,
MISS FISHER, MISS MESLOH

131-132. Physical Education. One credit hour. The year. Four hours each week. Required of all women students during the first year of attendance at the University.

Lectures on personal hygiene.

Gymnasium exercises, elementary Swedish gymnastics, calisthenics, drills with wands, Indian clubs, etc. Folk dances, technique of aesthetic dancing, and gymnastic games.

133-134. Physical Education. One credit hour. The year. Four hours each week for second year students; required of all women students.

Lectures on principles of physical education.

Gymnasium exercises, a continuation of Physical Education 131-132.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Two lectures, three hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Two lectures and three

hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

NOTE: The above courses are open only to juniors and seniors on approval of the department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing courses 135 and 136 should have had courses in anatomy, physiology, psychology and history of education.

Physical Education 125 for men is also open to women who desire to minor in Physical Education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARHART, BLAKE, SHEARD, AND ALPHEUS W. SMITH, ASSISTANT PROFESSOR HEIL, MR. WOODBURY, MR. ALVA W. SMITH, MR. DITTO, MR. SERVICE, AND DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures and laboratory. A non-mathematical course for students who have no entrance credit in physics. Mr. Ditto, Mr. Service.

105-106. General Physics. Four credit hours. The year. Three recitations and one three-hour laboratory period. Prerequisite, entrance credit in physics. Mr. Earhart, Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Heil.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Heil.

This course alternates with Physics 143-144.

143-144. Advanced Light and Electricity. Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106,

Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism, Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. **Proseminary in Physics.** One credit hour. The year. Prerequisite, two years of college work in physics or one year in physics and one in mathematics or chemistry. Mr. Cole.

*147. **Molecular Physics and Heat.** Three credit hours. First semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128.

*148. **Conduction of Electricity Through Gases and Radioactivity.** Three credit hours. Second semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128.

This course alternates with Physics 143-144.

*169-170. **Theory of Light.** Two credit hours. The year. Prerequisite, Physics 105-106 and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

FOR GRADUATES

201-202. **Research Laboratory.**

*203-204. **Theoretical Mechanics.**

205-206. **Thermodynamics and Electrolytic Conduction.**

*207-208. **Theory of Electricity and Magnetism.**

211-212. **Theory of Oscillations with Applications to Wireless Telegraphy.**

213-214. **Conduction of Electricity Through Gases and Radioactivity.**

*215-216. **Electromagnetic Theory.**

For description of graduate courses in this department see the *Bulletin of the Graduate School*.

*Not given in 1919-1920.

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

Office, 104 Biological Hall

PROFESSORS BROOKS AND BLEILE, ASSISTANT PROFESSORS
SEYMOUR AND McPEEK, MR. DURRANT,
AND DEPARTMENT ASSISTANTS

101-102. Physiology. Three credit hours. The year. Not open to freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including demonstrations in circulation, digestion, respiration, gross and minute anatomy, reflex actions, and other simple phenomena of living organisms.

***104. Chemical Physiology.** Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Bleile.

A laboratory course with lectures and recitations. The course includes laboratory study of foods, digestion, secretions, excretions and blood, with a short period devoted to urinalysis.

***106. Chemical Physiology.** Five credit hours. Second semester. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the physiology of the body fluids, foods, digestion, absorption, excretion, and metabolism.

119-120. General Physiology. Three credit hours. The year. Not open to freshmen. Mr. Bleile.

A course similar to 101-102 open to students who have no credit in chemistry. (Students who have had chemistry will elect Physiology 101-102.) A course presenting the principles of physiology in a non-chemical manner.

Physiology 119 is given also during the second semester.

135-136. General Physiology. Four credit hours. The year. Two lectures and four laboratory hours each week. Elective.

*Not given in 1919-1920.

Prerequisite, a general course in chemistry. Not open to freshmen. Mr. Bleile, Mr. Durrant.

A general course in physiology, including lectures and laboratory work for students who have had some training in chemistry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations and assigned readings. The content of the course varies from year to year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation and secretion.

111-112. Physiological Laboratory. Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

FOR GRADUATES

201-202. Advanced Physiology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 200 University Hall

PROFESSORS SPENCER, COKER, AND COTTRELL

101-102. Government in the United States and Europe. Three credit hours. The year.

A general survey of governmental institutions, national, state, and local, in the United States and the leading countries of Europe. This course is not open to freshmen. It is strongly

recommended that it be preceded by a year's work in college history. It should precede all other courses in this department.

Political Science 101 is given also during the second semester.

***109-110. State, County and Municipal Government in Ohio.** Two credit hours. The year. Prerequisite, Political Science 133-134 or 101-102. Mr. Cottrell.

The study covers the historical evolution and actual working of the governmental machinery and particular functions which it performs. It will deal with the constitutional, statutory and practical relations of the divisions of government; administrative officers and commissions; legislative practice and enactment; finances; relation between the State and minor subdivisions; working of different types of municipal charters; etc. Particular attention is given to the relation of the individual to the various divisions of government. The course provides a groundwork for those preparing to teach civics or engage in public service, journalism or civic secretarial work.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 100 B Hayes Hall

PROFESSORS CLIFTON AND TWISS, ASSISTANT
PROFESSOR LANDSITTEL

101. Principles of Education. Three credit hours. First semester. Prerequisite, Psychology 101-102; History of Education 101-102. By special permission, the History of Education may be taken concurrently with the above course.

A review of educational theory and the principles underlying teaching.

104. Observation, Criticism, and Practice. Three credit hours. Either semester. Prerequisite, Principles and Practice of Education 101.

A study of the general and special method; observation and criticism of classroom work in high school. Practice in teaching, ten weeks.

*Not given in 1919-1920.

105. Biological Principles in Education. Three credit hours. First semester. Prerequisite, Physiology 101 or equivalent.

This course is for undergraduate students, but by additional prescribed readings and reports may be applied as graduate credit. This course investigates the principles of education from the standpoint of biology, anthropology, physiology and hygiene.

106. Plant, Animal, and Human Behavior. Three credit hours. Second semester. Prerequisite, Physiology 101 or 105, or a preparation adequate to do the work of the course.

A study of behavior in plants, animals and man in search for guiding educational principles.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. Advanced Principles of Education. Three credit hours. The year. Prerequisite, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

PSYCHOLOGY

Office, 403 University Hall

PROFESSORS ARPS, PINTNER AND WEISS, ASSISTANT PROFESSORS BRIDGES, CRANE, AND GOUDGE-CRANE, MR. EVANS, MR. CULLER, MISS COY, MISS ROGERS, AND
DEPARTMENT ASSISTANTS

101-102. Elementary Psychology. Introductory course. Three credit hours. The year. All instructors.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

A limited number of beginning students in psychology may take 103-104 as equivalent to 101-102.

103-104. Elementary Psychology. Three credit hours. The year. Two lectures and one laboratory period each week. Mr. Weiss.

This course meets the same requirements as a prerequisite as Psychology 101-102. Designed for students who wish to perform some of the simpler psychological experiments in their elementary course.

The number of students admitted to this course is limited to forty.

107-108. Educational Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner, Mrs. Goudge-Crane, Mr. Evans, Miss Coy.

Psychology 107 is given also in the second semester.

Psychology 108 is given also in the first semester.

111. Experimental Psychology: Introduction. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 101-102. Mr. Weiss.

A systematic training course in the psychological methods as applied to the sense fields. Topics: vision, audition, the cutaneous, olfactory, gustatory, kinesthetic and organic senses.

112. Experimental Psychology: Advanced. Three credit hours. Second semester. One lecture and four laboratory hours each week. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A systematic training course in the psychological methods as applied to the more complex processes. Topics: perception, memory, attention, illusions, association and reaction time.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Crane.

This course is adapted to meet the needs of medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: nervous elements and their functions; end organs and their functions; cerebral functions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

127. Industrial Psychology. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Lectures, recitations, reports. Mr. Bridges.

The application of psychology to the following problems: vocational guidance, selection of industrial workers, industrial learning and training, the adaptation of technical to mental conditions, industrial monotony, fatigue, rest, and the length of the working day.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

114. Mental and Social Measurements. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Weiss.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education and the social sciences. Topics: standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

115-116. Genetic Psychology and Child Study. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Evans.

Psychology 115 treats of the development of mind together with the laws and principles which govern this development in the child. Psychology 116 treats of the various problems of child study and the child mind which concern the home, school and society.

118. Perception and Behavior. Two credit hours. First semester. This course alternates biennially with Psychology 153. Prerequisite, Psychology 104 or 111. Not open to first and second year students. Mr. Weiss.

A consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on the original nature of man, the function of the nervous system, and the interaction among individuals.

***119. Animal Psychology.** Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

It is desirable that students shall have had work in zoology or experimental psychology.

*Not given in 1919-1920.

A survey of animal behavior from the lower to the higher forms with especial emphasis upon the development of tropisms and instinctive reactions and their relation to the learning process in human behavior. A few typical experiments will be studied in the laboratory.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feebleminded. The causes of the same. Lectures, recitations and clinics.

124. Psychopathology. Two credit hours. Second semester. Prerequisite, Psychology 121. Mr. Bridges.

The so-called borderland phenomena; sleep and dreams, psychopathology of everyday life, hypnosis and the hypnotic state, hysteria, psychasthenia, neurasthenia, and the constitutional psychopathic states. Considerable attention will be given to the various interpretations of these phenomena. Lectures, recitations and reports.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

126. Folk Psychology. Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Evans.

The psychic factors involved in various group activities which apply to the problems of education, religion and social aims.

128. Psychology of Advertising. Two credit hours. First semester. Prerequisite, Psychology 103-104 or 101-102. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and emotions to effective advertising. Lectures, reports and investigation of practical problems in the laboratory.

129-130. Advanced Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

This course is intended for students who desire a more detailed knowledge of the normal mental processes than is possible in an introductory course. A course fundamental to all fields of psychology and philosophy and to allied fields which involve human behavior. This course is mainly a consideration of the cognitive processes.

133-134. Mental Tests. Three credit hours. The year. Prerequisite, Psychology 112 or 107-108 or 121-122. Mr. Pintner.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

137-138. Psychology of Emotion and Volition. Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

A study of the various theories of feeling and emotion; the relation of the affective processes to the life of cognition; theories of volition; determinism; sources of action; diseases of the will and their relation to social problems.

139-140. History of Psychology. Two credit hours. The year. Prerequisite, Psychology 129-130. Mr. Arps.

The principal aim of this course is to trace modern psychology back to its historical antecedents. This will include a consideration of the early metaphysical and empirical tendencies, the development of the fundamental concepts of psychology, and a history of the most important psychological theories such

as the theories of sensation, space perception, feeling and volition.

141-142. Minor Research. Two to four credit hours. The year. Prerequisite, at least twelve hours in psychology.

Investigation of minor problems in the various fields of psychology.

147-148. The Psychological Clinic. One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pinter, Mr. Evans.

Practical work in the diagnosis of defective and exceptional children.

151-152. Criminal and Legal Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to first and second year students. Mr. Crane.

A critical presentation of the evolution of the present day psychological conception of crime, with a study of the neurological basis of, and the nature of the stimuli to, anti-social behavior. There will be both a critical and experimental study of the psychological principles applied to the problems of testimony, those underlying recently advocated reforms in legal procedure, and the technique and reliability of suggested psychological methods for the detection of criminals.

***153. Theoretical Psychology.** Two credit hours. First semester. Alternating biennially with Psychology 118. Prerequisite, at least two years in psychology. Mr. Weiss.

Lectures, and assigned readings from Poincaré, Pearson, Mach, Avenarius. The evolution of modern psychology as influenced by the development of the natural sciences with special emphasis on the nature of psychological problems, experiments and laws.

155. The Treatment of Exceptional Children. Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104, and permission of instructor. Not open to first and second year students. Mr. Evans.

*Not given in 1919-1920.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children, both superior and inferior types. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual defects, moral eccentricities. Lectures, reports and practical work with children in the public schools.

FOR GRADUATES

201-202. Major Research.

203-204. Seminary in Psychology.

205-206. Contemporary Psychological Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 305 University Hall

PROFESSORS BOWEN AND INGRAHAM, ASSISTANT PROFESSORS
HAMILTON, CHAPIN, PEIRCE, GUIGOU AND HACKER, MR.
GUTIERREZ, MR. BERTHEMY, MR. TAILLIART, MRS.
ARTHUR, MR. WILLIAMS, MISS HIER, MR. YOUNG,
AND DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French except French 106. French 111, 112, and 119-120 must be preceded by French 107, 109, and 110, or an equivalent.

The undergraduate courses offered in French, and to some extent in Spanish, beginning with third-year collegiate work, fall into two general groups: (1) literary, (2) linguistic and practical; so that students may emphasize one or both of these lines of study. For students who enter with two years of high school French and who desire to major in French the following outline course is recommended:

First year: French 103-104.

Second year: French 107 and 109-110.

Third year: French 108, 111-112 and 113-114 or 115-116.

Fourth year: French 119-120, and 122, 217-218.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar: Fraser and Squair's, or equivalent. Reader: Aldrich

and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. All instructors.

Stress is laid first upon the acquisition of a correct pronunciation, after which the energy of the student is directed toward the attainment of (1) an accurate reading knowledge of the language, and (2) facility in speaking and understanding it. Grammar and composition are made to contribute to these ends.

French 101 is given also during the second semester, and French 102 is given during the first semester.

103-104. Modern French Literature. Four credit hours. The year. Prerequisite, French 101-102 or an equivalent. All instructors.

The work of the year deals with the following subjects: (1) Contes; (2) The novel (Balzac or Hugo); (3) Lyric poetry; (4) Romantic drama (Hugo). Prose composition with practice in speaking. Systematic attention given to syntax and idiom. Lectures supplement the work. Private reading required.

French 103 is given also during the second semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, French 103. Mr. Berthemy.

A course of rapid reading introductory to the vocabulary of scientific literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107. Advanced Prose Composition. Two credit hours. First semester. Mr. Bowen, Mr. Tailliant.

Cameron's French Composition followed by other selections. Dictation. Conversation. The course is conducted mainly in French.

108. History of French Literature. Two credit hours. Second semester. Lectures and illustrative readings. Mr. Tailliant.

109. Seventeenth Century Drama: Molière and Corneille. Three credit hours. First semester. Mr. Bowen, Mr. Peirce.

Lectures on the growth of French comedy and tragedy. Critical study of representative plays of Molière, Regnard, and Corneille. Collateral reading. Assigned topics and reports.

110. Seventeenth Century Tragedy and Prose. Three credit hours. Second semester. Mr. Bowen, Mr. Peirce.

Representative dramas of Racine; Hachette's *Théâtre Choisi de Racine*. Study of Descartes, Pascal, La Bruyère and others; Warren's *Selections*. Lectures, with collateral reading and reports.

111. Eighteenth Century Drama. Two credit hours. First semester. Prerequisite, French 109 and 110. Mr. Hacker.

Lectures on French comedy after Molière, with work centering on Marivaux and Beaumarchais. Study of the drama of Voltaire. Collateral reading and reports.

112. Nineteenth Century Drama. Two credit hours. Second semester. Prerequisite, French 109 and 110. Mr. Hacker.

Tendencies of French drama during the nineteenth century, with special reference to Scribe, Augier, Dumas fils, and Sardou. Lectures, with collateral reading and reports.

113. Recent French Prose. Two credit hours. First semester. Given biennially, alternating with French 115. Mr. Peirce.

Rapid reading with lectures. Selections from the works of such writers as Bazin, Bourget, Loti, and Bordeaux.

114. Practice in Speaking and Writing French. Two credit hours. Second semester. Given biennially, alternating with French 116. Mr. Berthemy.

***115. Eighteenth Century Prose.** Two credit hours. First semester. Given biennially, alternating with French 113. Mr. Bowen.

Selections from Voltaire (ed. Cohn and Woodward), Rousseau and others.

***116. Advanced Conversational Practice.** Two credit hours. Second semester. Given biennially, alternating with French 114. Mr. Berthemy.

119-120. Old and Middle French. Two credit hours. The year. Mr. Bowen.

*Not given in 1919-1920.

Studies in Old French (with emphasis on la Chanson de Roland) and in the language and writers of the sixteenth century. Special consideration of Montaigne.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Bowen.

Historical and critical survey of the methods of teaching French. The teacher's equipment. Class room aids. Special problems and difficulties in the teaching of French. Lectures; discussions; practice in conducting recitations.

123. French Phonetics. Two credit hours. First semester. Prerequisite, three years of collegiate French or the equivalent. Mr. Hacker.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

124. Review of French Syntax. Two credit hours. Second semester. Prerequisite, three years of collegiate French or the equivalent. Mr. Hacker.

A careful elucidation of French grammar, with composition to illustrate. Designed for advanced students who expect to teach French.

ITALIAN

101-102. Elementary Italian. Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Mr. Peirce or Mr. Williams.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Italian Novel. Two credit hours. First semester. Prerequisite, Italian 101-102. Mr. Peirce.

Manzoni (*I Promessi Sposi*, and others). Lectures.

104. Dante. Two credit hours. Second semester. Prerequisite, Italian 103. Mr. Peirce.

Selections from the *Inferno* and *Paradiso*. Lectures.

SPANISH

101-102. Elementary Spanish. Four credit hours. The year. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Elementary reading as a basis for oral and written practice.

Spanish 101 is given also during the second semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Intermediate Spanish. Four credit hours. The year. Prerequisite, Spanish 101-102 or an equivalent. Mr. Chapin, Mr. Gutierrez.

A more comprehensive survey of the forms and syntax with more advanced reading as a basis for practice in speaking and writing.

105-106. Advanced Spanish. Three credit hours. The year. Prerequisite, Spanish 103 and 104 or 110. Mr. Ingraham.

A study of Spanish syntax with illustrative exercises. Rapid reading of modern novels and plays.

107-108. Classical Spanish Literature. Two credit hours. The year. Prerequisite, Spanish 105-106. Mr. Ingraham.

Rapid reading of ballads and classical novels and dramas. Lectures on the history of Spanish literature.

110. Commercial Reading and Correspondence. Four credit hours. Second semester. Prerequisite, Spanish 103. Mr. Chapin.

A course designed to familiarize students with the vocabulary of business and with the forms of Spanish commercial paper and correspondence.

111. The Teaching of Spanish. Two credit hours. First semester. Prerequisite, four semesters of collegiate Spanish or its equivalent. Open to seniors and graduates. Mr. Ingraham.

Methods of teaching modern languages. Recitation from and discussion of a recent book on the subject. Reviews and discussion of recent text-books. The teacher's equipment. Class room aids. Lectures; discussions; practice in conducting recitations.

112. **Advanced Conversation and Composition.** Three credit hours. Second semester. Prerequisite, four semesters of college Spanish or an equivalent. Mr. Gutierrez.

Designed for persons desiring to use Spanish practically and for prospective teachers. One hour per week will be devoted to written composition and two to oral composition.

FOR GRADUATES

201-202. **Introduction to Romance Philology.**

203-204. **Old Provençal.**

205-206. **History of the Literary Movements in France in the First Half of the Nineteenth Century.**

207-208. **Research in French Literature.**

209-210. **Research in Spanish Literature.**

211-212. **Old Spanish.**

213. **Nineteenth Century French Lyric.**

215. **Seminary in Molière.**

216. **Seminary in Molière and his Successors.**

217-218. **Seminary in French Literature.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

RURAL ECONOMICS

Office, 209 Hayes Hall

PROFESSOR FALCONER, ASSISTANT PROFESSORS T. D. PHILLIPS
AND ERDMAN, MR. LANTIS

101. **Farm Accounting.** Two credit hours. Either semester. Mr. Phillips.

Lectures and practice work. The course deals with the general principles of accounting and their application to farm business. Systems of keeping farm records that are best adapted to different methods of farming are studied.

110. **Rural Community Life.** Three credit hours. Second semester. Prerequisite, Economics 101 or Sociology 101.

Lectures and recitations on rural organizations and community life. The rural church, rural school, rural home, and farmers' organizations and their bearing upon country life are studied.

FOR GRADUATES

201-202. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SCHOOL ADMINISTRATION

Office, 100 A Hayes Hall

PROFESSORS BROWN AND McCracken

101. Public Education in the United States. Three credit hours. Either semester. Three lectures each week and assigned readings. Required of all students in the College of Education, except teachers in service, who may take 105. Elective to others. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

An introductory survey of public education in the United States, as the expression and promoter of democracy. School laws, regulations and decisions of Ohio. Credit for both 101 and 105 will not be given.

105. Public Education in the United States. Two credit hours. Either semester. Two lectures each week, and assigned readings. Open to teachers, supervisors, principals, and superintendents in active service, subject to the approval of the instructor in charge. Required of all such enrolled in the College of Education who do not take 101. Elective to all such if enrolled in other colleges. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

Credit for both 101 and 105 will not be given.

(This course is an abridgment of School Administration 101 and will be offered on Saturdays or evenings.)

FOR ADVANCED UNDERGRADUATES AND GRADUATES

102. State School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings,

investigations, and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit one year of experience. Mr. Brown.

A comparative study of the school systems of the various American states including such topics as federal and state policies, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, the state and non-state education.

103. The Administration of Rural Education. Two credit hours. First semester. Two lectures each week, assigned readings, investigations and reports. Elective. Prerequisite, 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Problems affecting the organization, administration, supervision, and inspection of rural schools.

104. School Hygiene. Two credit hours. Second semester. Two lectures each week, assigned readings, investigations and reports. Elective. Prerequisite, 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

A study of school hygiene, including such topics as communicable diseases, hygiene of vision, of hearing, and of teeth; nutrition, hygiene of instruction, health of the teacher, fatigue, and equipment of buildings and grounds.

111. The Administration of Secondary Schools. Three credit hours. First semester. Three lectures each week, assigned readings and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Historical forerunners of the high school, types of high schools, aims of secondary education, relation to higher and elementary education, high schools of the North Central States, curricula and time schedules, college entrance requirements, buildings, equipment, texts, supplies, support, and cost. Credit will not be given for both 111 and 117.

112. The Administration of Secondary Schools. Three credit hours. Second semester. Three lectures each week, assigned readings and reports. Elective. Prerequisite, junior standing,

and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Retardation, elimination, overage, delinquency, student activities, grading, records, reports, hygiene, sanitation, health; preparation, selection, assignment, tenure, and pay of teachers. Credit will not be given for both 112 and 118.

113. **The Administration of Elementary Schools.** Three credit hours. First semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Aims, organization, and control, types of schools, curricula, schedules, texts, supplies, relation to secondary and vocational education, buildings, equipment, grounds, support and cost. Credit will not be given for both 113 and 119.

114. **The Administration of Elementary Schools.** Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Retardation and elimination, individual differences, grading and promotions, efficiency tests and records, delinquents and defectives, student activities. Teacher: training, selection, promotion, tenure, salaries, pension, organizations. Credit will not be given for both 114 and 120.

115. **Educational Statistics.** Two credit hours. First semester. Two lectures each week, assigned readings and problems. Elective. Open to superintendents, principals, and graduates of experience, by permission of the instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. **City School Administration.** Three credit hours. Second semester. Three lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit one year of experience. Mr. McCracken.

A comparative and critical study of several types of existing city school systems. A thesis on some problem required of each student.

***117. Problems of High School Administration.** Two credit hours. First semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. Brown.

Credit for both 111 and 117 will not be given.

(This course is an abridgment of School Administration 111 and will be offered Saturdays and evenings.)

***118. Problems of High School Administration.** Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. Brown.

Credit for both 112 and 118 will not be given.

(This course is an abridgment of School Administration 112 and will be offered Saturdays or evenings.)

119. Problems of Elementary School Administration. Two credit hours. First semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Credit for both 113 and 119 will not be given.

(This course is an abridgment of School Administration 113 and will be offered Saturdays or evenings.)

120. Problems of Elementary School Administration. Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or

*Not given in 1919-1920.

105, and for graduate credit one year of experience. Mr. McCracken.

Credit for both 114 and 120 will not be given.

(This course is an abridgment of School Administration 114 and will be offered Saturdays or evenings.)

133-134. The Administration of Higher Education. Three credit hours. The year. Three lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates, by permission of the instructor in charge. Prerequisite, eight hours of school administration and two years of experience. Mr. Brown.

A comparative study of various types of control, organization, and administrative policies as illustrated in selected colleges, universities, technical schools, junior colleges, normal schools and normal colleges.

FOR GRADUATES

201. Seminary in School Administration.

202. Seminary in School Administration.

For description of graduate courses in this department see the Bulletin of the Graduate School.

AGRICULTURAL EDUCATION

122. The Teaching of Agriculture in the High School. Two credit hours. Second semester.

The administrative phases of secondary agriculture, the application of the principles of pedagogy to the teaching of agriculture in the high school, and the organization of agricultural materials into secondary courses of study will constitute the essential features. Intended for superintendents, principals and teachers of secondary agriculture in the high schools of the state. Text-book: Bricker's "The Teaching of Agriculture in the High School."

123-124. The Elements of General Agriculture. Three credit hours. The year.

This course is designed to furnish a general fund of knowledge of the science and art of agriculture as a basis for pedagogical study, and preparation to teach either elementary or

secondary agriculture in the public schools of Ohio. It will also furnish an excellent basis for the further pursuit of the more specialized divisions of agriculture offered in the College of Agriculture. The work of the first semester will consist of plant studies, animal studies, and studies in farm management; and machine studies, soil studies, and studies of the conditions of plant growth will be considered during the second semester. The last topic will include work in the greenhouse, the demonstration field, and investigations of plant diseases and insect pests, together with remedial measures.

127. History of Agricultural Education. Two credit hours. First semester.

A survey of the rise and development of agricultural instruction in the United States. The land-grant colleges, the agricultural experiment stations, secondary and elementary school instruction, farmers' institutes, agricultural societies, the club movement, etc. Ohio agricultural educational institutions.

132. Teaching of Elementary Agriculture. Two credit hours. First semester.

This course is designed to meet the pedagogical requirements of township superintendents, rural teachers, and teachers in village elementary schools. The present status of agricultural instruction in the elementary schools, the arrangement of the materials of elementary agriculture into a course of study, the methods of presentation of the subject matter, and the organization and use of popular auxiliaries to public school instruction in agriculture will be considered.

SHOPWORK

Office, 125 Shop Building

PROFESSOR SANBORN, ASSOCIATE PROFESSOR W. A. KNIGHT, MR. CASE, MR. BEEM, MR. FOUST, MR. DENMAN, MR. BRECKUR, MR. P. L. WRIGHT, MR. BALMER, AND DEPARTMENT ASSISTANTS

105. Foundry Work. Two credit hours. Either semester. Industrial Education, first year. Mr. Breckur.

115. Forging. Two credit hours. Either semester. Industrial Education, third year. Mr. Foust, Mr. Wright.

118. Advanced Forging. Two credit hours. Second semester. Prerequisite, Shopwork 115. Industrial Education, fourth year. Mr. Foust, Mr. Wright.

119. Machine Work. Three credit hours. Either semester. Industrial Education, third year. Mr. Knight, Mr. Case, Mr. H. R. Wright.

121. Advanced Machine Work. Three credit hours. Either semester. Prerequisite, Shopwork 119. Optional, Industrial Education, fourth year. Mr. Knight, Mr. Case, Mr. H. R. Wright.

123. Advanced Machine Work. Two credit hours. First semester. Prerequisite, Shopwork 121. Elective. Mr. Knight, Mr. Case, Mr. H. R. Wright.

125. Construction Work. Two credit hours. Either semester. Prerequisite, Shopwork 121. Elective. Mr. Knight, Mr. Case, Mr. H. R. Wright.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN AND OSBORN, ASSOCIATE PROFESSOR HINE,
ASSISTANT PROFESSORS BARROWS, KRECKER, AND MET-
CALF, MR. KOSTIR, MR. DE LONG, MISS MOSHER,
AND DEPARTMENT ASSISTANTS

For those students desiring to receive a recommendation for the teaching of zoology in secondary schools the department suggests that in addition to the introductory course, Zoology 101-102, one or more of the following courses be taken: 107-108, Economic Entomology; 121-122, Invertebrate Morphology; 131-132, Evolution; 159-160, Animal Ecology.

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Lectures and laboratory. Mr. Osburn, Mr. Barrows, Mr. Kreckler, Mr. Kostir, Mr. De Long, and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology, and to serve as a foundation for more advanced courses.

Zoology 101 is given also during the second semester.

115. General Principles of Heredity. Three credit hours. Either semester. Three lecture periods. Prerequisite, Zoology 101-102 or Botany 101-102 or equivalent. Mr. Barrows.

A study of heredity in animals and plants to serve as an introduction to heredity as a basis for advanced work in plant and animal breeding and as an aid in the analysis of biological and sociological problems into which the question of heredity enters. The subject will be presented in lectures, illustrated with lantern slides and actual specimens. Exercises in the form of problems will be assigned. The different types of heredity studied will be chosen from the animal and plant material which best illustrates the subject. Hereditary characters found in man will be used to a large extent. The course will be made as simple and practical as the subject will permit. Present day theories and technical applications will be left for discussion in the more advanced courses to which they properly belong.

121-122. Advanced Zoology of Invertebrates. Three credit hours. The year. One lecture and two laboratory periods. Prerequisite, Zoology 101-102 or equivalent. Mr. Kostir.

A study of the structure, life histories, habits and relationships of invertebrate animals, together with the consideration of important biological principles. Lectures, laboratory exercises, and occasional field trips.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osburn.

The facts and theories of the origin, development, and distribution of animal life. The general order of treatment is: historical aspects, evidences, factors and modern theories. The relation of evolutionary doctrine to practical problems is emphasized.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year in biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year in biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

159-160. Animal Ecology. Three to five credit hours. The year. Prerequisite, Zoology 101-102, and one additional year of a biological science. Mr. Kreckler.

A study of animals in their habitats and of the factors involved. Field work, lectures and laboratory.

FOR GRADUATES

201-202. Seminary in Zoology.

223-224. Invertebrate Embryology.

241-242. Research Work.

247-248. Invertebrate Zoology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. Economic Entomology. Three credit hours. The year. Prerequisite, Zoology 101-102 or equivalent. Mr. Metcalf and assistants.

An elementary course on structure, physiology, development and habits of insects, as a basis for insect control and for special study in entomology; followed by a general systematic survey of insects, mites and ticks with special attention to beneficial species and those injurious to farm, orchard, garden, forest, household, mill and storehouse and the health of man and domestic animals.

Lectures, quizzes, problems and laboratory work on general anatomy, life-stages, field observations and habits and damage and the preparation and application of remedial measures. Stu-

dents are required to prepare a collection. Those desiring to collect specimens in advance should get printed instructions from the department.

FOR GRADUATES

201-202. Seminary in Entomology.

241-242. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

TIME SCHEDULE

COLLEGES OF ARTS AND EDUCATION

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Departments of Instruction without first consulting the secretary of their college.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours per semester of the course.

KEY TO ABBREVIATIONS

Bi.—Biological Building

B. Z.—Botany and Zoology Building

Br.—Brown Hall

Ch.—Chemistry Hall

Ha.—Hayes Hall

H. E.—Home Economics Building

H. F.—Horticulture and Forestry Building

L.—Library

Lo.—Lord Hall

M.—Machinery Hall

Obs.—Observatory

O.—Orton Hall

P.—Page Hall

Pav.—Judging Pavilion

Ph.—Physics Building

R. L.—Robinson Laboratory

S.—Shops Building

T.—Townshend Hall

U.—University Hall

V. C.—Veterinary Clinic

V. L.—Veterinary Laboratory

L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

AGRICULTURAL CHEMISTRY AND SOILS

AGRICULTURAL CHEMISTRY

Course No.	Hours	Time	Room	Instructor
—123	4	L., Tu., at 9	T. 205	Lyman, Froning
		Tu., at 2	T. 205	
		Q., Th., at 9	T. 205	
		Th., at 2	T. 205	
		Lab., M., W., 8 to 11	T. 210	
		Tu., Th., 1 to 4	T. 210	

SOILS

—152	5	L., M., W., at 8	T. 205	Vivian, Bear
		M., W., at 1	T. 205	
		Q., F., at 8	T. 205, 204, 200	
		F., at 1	T. 205, 204, 200	
		Lab., Tu., Th., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	

AGRICULTURAL ENGINEERING

101—	4	M., W., F., at 3	M. L.	Ramsower, Potter
		Lab., Tu., 8 to 11		
		W., 8 to 11		
		Th., 8 to 11		
—101	4	M., Th., F., at 11	M. L.	Ramsower, Potter
		Lab., Tu., 1 to 4		
		W., 1 to 4		
		Th., 1 to 4		

AMERICAN HISTORY

101—102	3	M., W., F., at 8	U. 205	All Instructors
		M., W., F., at 8	L. 107	
		M., W., F., at 9	U. 205	
		M., W., F., at 9	L. 107	
		M., W., F., at 10	U. 205	
		M., W., F., at 10	L. 107	
		M., W., F., at 1	U. 209	
		M., W., F., at 1	L. 107	
		M., W., F., at 2	U. 205	
		M., W., F., at 2	L. 107	
		M., W., F., at 3	U. 205	
		M., W., F., at 3	U. 209	
102—101	3	M., W., F., at 8	U. 209	Wittke
	3	M., W., F., at 1	U. 205	Wood
—101	3	M., W., F., at 2	U. 209	
107—108	2	Tu., Th., at 10	U. 205	Hockett

AMERICAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
109—110	2	Tu., Th., at 8	U. 205	Schlesinger
113—	3	M., W., F., at 10	U. 209	Schlesinger
—114	3	M., W., F., at 10	U. 209	Knight
—118	2	Tu., Th., at 9	U. 209	Wittke
119—	2	M., 3 to 5	L. 303	
121—	2	Tu., Th., at 9	U. 209	Knight
123—124	3	M., W., F., at 9	U. 209	Knight
125—126	2	Tu., Th., at 1	U. 205	Wood
—130	3	M., W., F., at 1	L. 307	Schlesinger
205—206	2	M., 3 to 5	L. 303	Knight, Hockett

ANATOMY

101—102	3 or 5	L., M., at 1 Lab., M., Tu., W., 1 to 4	Bio. 102	Baker
103—104	3 to 5	L., W., at 1 Lab., W., Th., F., 1 to 4	Bio. 107	Landacre
105—106	3 to 5	To be arranged	Bio. 102	Baker
107—108	3 to 5	L., Tu., at 4 Lab., M., Tu., 1 to 4	Bio. 102	Knouff
109—110	3 to 5	To be arranged	Bio. 106	Landacre
111—112	1	M., at 4	Bio. 101	Landacre
113—114	3 to 5	To be arranged	Bio. 107	Landacre
—116	3	To be arranged		
—118	3 to 5	L., Tu., at 8	Bio. 100	Landacre
(pre-med)		Th., at 1 Lab., Tu., 9 to 11 Th., 8 to 11 Tu., 1 to 4 Th., 2 to 4 For 5 hrs. credit F., 1 to 4 additional	Bio. 102	Baker
119—120	3 to 5	To be arranged		Baker
121—	6	Tu., W., Th., F., 1 to 5	Park St. 410	Buck
122—	4	Tu., W., Th., 1 to 5	Park St. 410	Buck
125—	4	W., F., 1 to 5	Park St. 409	Smith
—126	4	W., F., 1 to 5	Park St. 409	Smith
127—	3 to 5	L., W., F., at 8 Lab., W., 9 to 12	Park St. 410	Buck
131—	2	To be arranged	Park St. 410	Buck
133—	6	L., M., W., F., at 8 M., at 1 Lab., M., W., F., 9 to 12	Park St. 400 Park St. 413	Landacre Warren
—134	4	To be arranged		Landacre, Warren
—136	4	L., M., W., F., at 8 M., at 1 Lab., M., W., F., 9 to 12	Park St. 400	Landacre

ANATOMY—Continued

Course No.	Hours	Time	Room	Instructor
		F., 1 to 5	Park St. 408	Buck
			Park St. 413	Warren
139—		L., W., F., at 8	Park St. 400	Warren
		Lab., F., 9 to 12	Park St. 413	
—140	2	L., Th., at 8	Park St.	Baker
		Lab., F., 9 to 12		
—142	4	L., M., F., at 8	Bio. 100	Knouff
		Lab., W., 1 to 5		
143—	5	L., M., W., F., at 1	Bio. 100	Knouff
		Lab., M., W., F., 2 to 4		
145—	4	To be arranged		Landacre
149—150	3 to 5	To be arranged	Park St. 413	Warren
—152	3	To be arranged	Park St. 410	Landacre
				Buck
—154	1	Tu., 8 to 10	Park St.	Baker
201—202	3 to 5	To be arranged		Landacre
203—204	5 to 10	To be arranged		

ANIMAL HUSBANDRY

135—	4	L., M., W., F., at 2	Pav.	Coffey
		Lab., Tu., 8 to 10		
		Th., 8 to 10		
—135	4	L., M., W., F., at 10	Pav.	Coffey
		Lab., M., 1 to 3		
		W., 1 to 3		
137—	3	M., W., F., at 9	Pav.	Coffey
—137	3	M., W., F., at 3	Pav.	Conklin

ART

117—	3	M., W., F., at 8	Ha.	Robinson
119—119	1	M., at 4	Ha. 204	Kelley
		Th., at 11		
121—	2	Tu., Th., 9 to 11	Ha. 303	Talbot
—121	2	Tu., Th., 1 to 3	Ha. 303	Talbot
131—	2	M., W., 8 to 10	Ha. 303	Norris
		M., W., 1 to 3	Ha. 303	Talbot
		Tu., Th., 8 to 10	Ha. 303	Christensen,
				Norris
		Tu., Th., 1 to 3	Ha. 303	Robinson,
				Christensen
—131	2	Tu., Th., 8 to 10	Ha. 303	Norris
132—	2	M., W., 1 to 3	Ha. 303	Kelley
—132	2	Tu., Th., 8 to 10	Ha. 303	Christensen
		M., W., 9 to 11	Ha. 303	Norris
133—	2	M., W., 9 to 11	Ha. 303	Norris
		W., F., 9 to 11	Ha. 303	Robinson

ART—Continued

Course No.	Hours	Time	Room	Instructor
—133	2	Tu., Th., 2 to 4	Ha. 303	Robinson
134—134	3	Tu., Th., 8 to 11	Ha. 303	Kelley
135—135	4	Tu., Th., 1 to 4	Ha. 303	Norris
136—	2	Tu., Th., 8 to 10	Ha. 303	Robinson
—136	2	M., W., 9 to 11	Ha. 303	Robinson
		Tu., Th., 9 to 11	Ha. 303	Robinson
—137	3	M., W., 8 to 11	Ha. 303	Robinson
138—	3	To be arranged	Ha. 303	Kelley
—139	3	To be arranged	Ha. 303	Kelley
141—	2	Tu., Th., at 10	Ha. 204	Christensen
—141	2	Tu., Th., at 8	Ha. 204	Robinson
		Tu., Th., at 10	Ha. 204	Talbot
		Tu., Th., at 1	Ha. 204	Christensen
		Tu., Th. at 3	Ha. 204	Christensen
142—	3	M., W., 8 to 10	Ha. 303	Talbot
—142	3	M., W., 8 to 10	Ha. 303	Talbot
—143	3	M., W., 2 to 4	Ha. 303	Talbot
—144	3	M., W., 8 to 10	Ha. 303	Norris
—145	3	To be arranged		
151—152	3	M., W., F., at 8	Ha. 204	Kelley
—151	3	M., W., F., at 10	Ha. 204	Kelley
153—	3	M., Tu., F., at 11	Ha. 204	Christensen
154—155	2	Tu., Th., at 2	Ha. 204	Christensen
—156	2	Tu., Th., at 4	Ha. 204	Robinson
157—	3	M., W., F., at 3	Ha. 204	Kelley
—158	5	To be arranged		Kelley
—160	3	M., W., F., at 3	Ha. 204	Kelley
—162	2	Tu., Th., 9 to 11	Ha. 303	
163—164	2	Tu., Th., 8 to 10	Ha. 303	

ASTRONOMY

101—102	3	M., W., F., at 3	Obs.	
		M., W., F., at 1	Obs.	
104—	3	M., W., F., 9 to 12	Obs.	Lord
—105	3	Tu., 8 to 11; W. F., at 3	Obs.	Lord
		Th., 1 to 4; Tu., F., at 11		
107—108	3 to 5	To be arranged	Obs.	Lord
109—110	4	To be arranged	Obs.	Lord
111—112	3 to 5	To be arranged	Obs.	

BACTERIOLOGY

102—	2	L., ,Th., at 3	V. L. 101	Masters
107—	4 or 5	L., M., W. at 9	V. L. 101	Morrey
		M., W., at 2	V. L. 102	Morrey
		Tu., Th., at 9	V. L. 102	Morrey
		Lab., Tu., Th., 8 to 11	V. L. 8	Masters

BACTERIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
			V. L. 201	Ockerblad
			V. L. 205	Morrey
		Tu., Th., 1 to 4	V. L. 8	Masters
		M., W., 8 to 11	V. L. 8	Masters
			V. L. 201	Ockerblad
		M., W., 1 to 4	V. L. 8	Masters
—108	2 to 5	L., M., W., at 9	V. L. 102	Morrey
		M., W., at 2	V. L. 102	Morrey
		Lab., M., W., F., 8 to 11	V. L. 201	Masters, Ockerblad
		M., W., F., 1 to 4	V. L. 201	Masters, Ockerblad
—110	2 to 5	L., Tu., Th., at 9	V. L. 102	Morrey
		Lab. to be arranged		Morrey, Masters
—112	2 to 5	L., Tu., Th., at 10	V. L. 102	Morrey
		Lab. to be arranged		Morrey, Masters
—114	2 to 5	L., Tu., Th., at 8	V. L. 102	Morrey
		Lab. to be arranged		Morrey, Masters
—116	2 to 5	L., M., W., at 8	V. L. 102	
		Lab. to be arranged		
117—118	2 to 5	L., W., F., at 1	V. L. 101	Starin
		Lab., M., S., 9 to 11		
		(2nd semester only)	V. L. 8	Starin
119—120	2 to 5	L., M., F., at 11	V. L. 102	Starin
		Lab. to be arranged		Starin
121—122	3 to 5	To be arranged		Morrey
123—124	3 to 5	To be arranged		Morrey
125—126	3 to 5	To be arranged		Morrey, Starin
131—132	4	L., W., F., at 8	V. L. 102	Starin
		Lab., W., F., 9 to 12	V. L. 205	Starin
141—	6	L., M., W., at 1	V. L. 102	Morrey
		Lab., M., W., 2 to 5 and	V. L. 205	Starin
		Tu., Th., F., 1 to 5	V. L. 201	Starin
—150	4	L., M., W., at 10	V. L. 102	Morrey
		Lab., Tu., F., 1 to 4	V. L. 201	Masters, Ockerblad
201—202		To be arranged		Morrey, Starin
203—204		To be arranged		Morrey, Starin

For Short Courses Only

51—	3	M., W., at 4	V. L. 102	Morrey
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BIBLIOGRAPHY

Course No.	Hours	Time	Room	Instructor
101—102	1	Tu., at 3	Li. 107	Jones
103—	½	Th., at 3	Li. 107	Reeder
		M., at 11	Li. 107	Reeder
105—105	2	M., W., at 4	Li. 107	Reeder

BOTANY

101—102	3	L., Tu., Th., at 8	B. Z. 208, 110	All Instruc- tors
		Tu., Th., at 9	B. Z. 208, 110	
		Tu., Th., at 10	B. Z. 208, 110	
		Tu., Th., at 1	B. Z. 110, 208	
		Tu., Th., at 2	B. Z. 110, 208	
		Tu., Th., at 3	B. Z. 110, 208	
		Lab., M., 1 to 3	B. Z. 108	
		W., 8 to 10	B. Z. 108	
		W., 1 to 3	B. Z. 108	
		Th., 8 to 10	B. Z. 108	
		Th., 1 to 3	B. Z. 108	
		F., 8 to 10	B. Z. 108	
		F., 1 to 3	B. Z. 108	
—101	3	L., M., W., at 2		
		Lab., M., 8 to 10		
107—108	2	To be arranged	B. Z. 108	Detmers
110—	2	W., 1 to 4	B. Z. 108	Griggs
—116	3	L., M., W., at 10	B. Z. 208	Stover
		Lab., F., 10 to 12	B. Z. 206	
117—118	3	L., M., at 10	B. Z. 110	Transeau
		Lab., W., 1 to 5	B. Z. 66	
—120	3	S. and M. arranged	B. Z. 210	Griggs
121—	3	L., W., at 1	B. Z. 110	Schaffner
		Lab., W., 2 to 4	B. Z. 62	
123—124	4	L., M., W., at 10	B. Z. 109	Griggs
		Lab. to be arranged	B. Z.	
125—126	4	L., M., W., at 9	B. Z. 110	Transeau
		Lab., Tu., Th., 1 to 3	B. Z. 112	
		Tu., Th., 3 to 5	B. Z. 112	
127—128	4	L., Tu., Th., at 11	B. Z. 110	Stover
		Lab., M., F., 10 to 12	B. Z. 210	
129—130	3 to 5	M., 1 to 4; other hours arranged	B. Z. 60	Schaffner
133—134	3 to 5	To be arranged		All Instruc- tors
135—136	1	Tu., at 4	B. Z. 110	Schaffner
139—140	3	To be arranged	B. Z. 210	Stover
—142	2	Th., 1 to 4	B. Z. 62	Schaffner
—150	3	Tu., at 9; W., 9 to 11	B. Z. 110, 112	Transeau

BOTANY—Continued

Course No.	Hours	Time	Room	Instructor
151—	3	To be arranged	B. Z.	Sampson
201—202	3 to 10	To be arranged	B. Z. 104	Schaffner, Griggs
203—204	4 to 10	To be arranged	B. Z. 104	Schaffner, Griggs
205—206	4 to 10	To be arranged	B. Z. 112	Transeau
207—208	3 to 10	To be arranged	B. Z. 210	Griggs, Stover
209—210	1	To be arranged	B. Z.	Schaffner

For Short Courses Only

91—	4	To be arranged	B. Z.
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CHEMISTRY

105—106	4	L., M., at 8	Ch. 200	Evans and department assistants
		W., at 9	Ch. 200	
		M., at 1	Ch. 200	
		W., at 2	Ch. 200	
		Q., W., at 8	Ch. 101, 302	
		F., at 8	Ch. 302	
		F., at 9	Ch. 101, 302	
		F., at 11	Ch. 302	
		W., at 1	Ch. 101, 302	
		F., at 1	Ch. 101, 302	
		F., at 2	Ch. 101, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
106—105	4	Tu., Th., 1 to 4		
		L., W., at 8	Ch. 200	
		W., at 1	Ch. 200	
		Q., M., at 8	Ch. 101	
		M., at 1	Ch. 101	
		Lab., F., S., 8 to 11		
109—110	4	Tu., Th., 1 to 4		Evans and department assistants
		L., F., at 10	Ch. 200	
		F., at 3	Ch. 200	
		Q., M., at 10	Ch. 207	
		M., at 3	Ch. 101, 302	
		W., at 10	Ch. 101, 207	
		W., at 3	Ch. 101, 302	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
10-109	4	L., M., at 9	Ch. 200	
		M., at 2	Ch. 200	
		Q., F., at 10	Ch. 302	
		F., at 2	Ch. 207	
		Lab., F., S., 8 to 11		
		M., W., 1 to 4		
13-114	2	Tu., Th., at 1	Ch. 200	Henderson, Mellon
17-	3	To be arranged		Hollingsworth
19-120	4	L., F., at 10	Ch. 207	Foulk
		M., at 3	Ch. 200	Foulk
		Lab. open mornings and afternoons		
21-	4	L., M., at 3	Ch. 200	Foulk
		Lab., Tu., W., 1 to 4		
-124	1	Th., at 3	Ch. 200	Foulk, Hollingsworth
27-	4	M., Tu., Th., F., at 11	Ch. 200	Boord
-132	2	Tu., at 11; F., at 4	Ch. 101	
-136	2	Tu., Th., at 11	Ch. 207	Foulk
-140	4	Thesis—To be arranged		
50-	3	Tu., Th., at 9; S., at 11	Ch. 101	Evans
	5	Tu., Th., at 9; S., at 11		
		Lab., Tu., Th., 1 to 4		
		M., W., 1 to 4		
51-152	2	Tu., Th., at 8	Ch. 200	McPherson
53-154	2 or 3	Lab. open afternoons		McPherson, Boord
55-156	2	To be arranged		Boord
57-158	3	M., W., F., at 8	Ch. 207	Henderson
59-	3	M., W., F., at 9	Ch. 207	Henderson
61-161	2 or 3	Laboratory open daily 8 to 12 and 1 to 4		Henderson, Mellon
65-	2	M., W., at 11	Ch. 207	Foulk
67-	3 to 5	To be arranged		Hollingsworth
-163	3 to 5	L., Tu., at 9	Ch. 207	Hollingsworth
		Lab. to be arranged		
69-	3 to 5	To be arranged		Foulk
-176	3	M., F., at 11	Ch. 207	Foulk
177-	2	M., Tu., at 11	Ch. 302	Withrow
-178	1	M., at 11	Ch. 302	Withrow
-182		Inspection trip		
-184		Report		
185-	2	M., Tu., 1 to 4	Ch.	Withrow, Vilbrandt
-186	3	M., 1 to 4; Tu., 9 to 12, and 1 to 4		Withrow, Vilbrandt

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
187—187	3	Lab. open afternoons		Henderson, Mellon
—194	2	To be arranged	Ch. 302	Withrow
—196	2	M., Th., at 11	Ch. 101	Henderson
201—202	3	To be arranged		Henderson
205—206	2 or 3	To be arranged		Boerd
209—210	3	To be arranged		Henderson
215—	2	Tu., 4 to 6	Ch. 302	
—218	2	To be arranged		Evans
221—	2	To be arranged		Henderson
225—226	2	To be arranged		Withrow
235—236	5 to 10	To be arranged		
239—	2	To be arranged		Foulek

COMPARATIVE LITERATURE

111—112	1	M., at 3	U. 306	Elden
175—	2	Tu., Th., at 2	U. 319	Barrows
195—	2	Tu., F., at 4	U. 306	Bolling
197—	2	Tu., Th., at 1	U. 321	Barrows
—214	2	To be arranged	Ph.	Barrows

DAIRYING

101—	4	M., W., F., at 10	T. 200	Stoltz
		Lab., Tu., 1 to 4	T. 3, 5, 10	
		F., 1 to 4	T. 3, 5, 10	
—101	4	M., W., F., at 2	T. 200	Stoltz
		Lab., Tu., 8 to 11	T. 3, 5, 10	
		F., 8 to 11	T. 3, 5, 10	

ECONOMICS AND SOCIOLOGY

ECONOMICS

101—102	3	M., W., F., at 8	P. 12	All Instruc-
		M., W., F., at 8	P. 13	tors
		M., W., F., at 8	P. 7	
		M., W., F., at 9	P. 12	
		M., W., F., at 9	P. 13	
		M., W., F., at 9	P. 9	
		M., W., F., at 10	P. 12	
		M., W., F., at 10	P. 13	
		M., W., F., at 10	P. 109	
		M., Th., F., at 11	P. 12	
		M., Th., F., at 11	P. 109	
		M., Th., F., at 11		
		M., W., F., at 1	P. 12	
		M., W., F., at 1	P. 13	

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 2		
		M., W., F., at 2	P. 109	
		M., W., F., at 3	P. 12	
		M., W., F., at 3	P. 13	
—101	3	M., W., F., at 3	P. 109	
		M., W., F., at 3	P. 9	
02—	3	M., W., F., at 8	P. 109	
		M., W., F., at 9	P. 109	
		M., W., F., at 2	P. 6	
		M., W., F., at 3	P. 109	
03—	2	Tu., Th., at 10	P. 6	Weidler
—104	2	Tu., Th., at 8	P. 109	Huntington
05—	2	Tu., Th., at 8	P. 12	Ruggles
—106	2	Tu., Th., at 8	P. 12	Walradt
07—108	3	M., W., F., at 9	Ph. 304	
09—	3	M., W., F., at 8	Ph. 304	Weidler
—112	2	Tu., Th., at 8	P. 6	Weidler
19—120	3	M., W., F., at 2	P. 9	Mark
21—	2	Tu., Th., at 9	P. 6	Huntington
—122	3	M., W., F., at 9	P. 6	Huntington
27—128	2	Tu., Th., at 1	P. 12	Lockhart
29—	2	Tu., Th., at 9	P. 12	Eckelberry
32—133	3	M., W., F., at 10	P. 6	
		M., W., F., at 1	P. 6	Huntington
—132	3	M., W., F., at 2	P. 13	Weidler
39—140	3	L., Tu., Th., at 8	P. 7	Eckelberry
		Tu., Th., at 9	P. 9	
		Tu., Th., at 9	P. 7	
		Tu., Th., at 10	P. 13	
		Tu., Th., at 11	P. 6	
		Tu., Th., at 1	P. 6	
		Tu., Th., at 2	P. 6	
		Tu., Th., at 3	P. 6	
		Lab., M., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		M., 3 to 5	P. 11	
		Tu., 10 to 12	P. 11	
		Tu., 1 to 3	P. 11	
		W., 8 to 10	P. 11	
		Th., 10 to 12	P. 11	
		F., 8 to 10	P. 11	
140—139	3	L., Tu., Th., at 10	P. 109	Sheppard
		Tu., Th., at 11		
		Tu., Th., at 3	P. 109	
		Lab., Tu., 8 to 10	P. 11	
		W., 1 to 3	P. 11	
		W., 3 to 5	P. 11	
141—144	2	Tu., Th., at 10	P. 9	Lockhart

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
145—146	2	Tu., 3 to 5	P. 6	Ruggles
147—148	2	Tu., Th., at 1	P. 13	Walradt
149—150	3	M., W., F., at 1	P. 9	
150—149	3	M., Th., F., at 11	Ph. 302	
154—153	3	M., Th., F., at 11	P. 9	Lockhart
157—158	2	Tu., Th., at 9	P. 13	Weidler
159—	3	M., W., F., at 9	P. 6	Huntington
160—162	3	M., W., F., at 1	P. 109	
163—	3	M., W., F., at 9	P. 7	Hammond
165—166		M., W., F., at 3	P. 7	Hammond
167—168	3	M., W., F., at 3	P. 6	Ruggles
169—170	2	Tu., Th., at 1	P. 9	
171—	3	M., W., F., at 8		Huntington
—172	3	M., W., F., at 2		
173—	3	M., W., F., at 10	P. 11	Huntington
—174	3	M., W., F., at 2	O. 1	Sheppard
—175	3	M., W., F., at 3	Ph. 102	Coon
177—178	2	L., Tu., at 2	P. 12	Mark
		Lab., Th., 1 to 3	P. 11	
181—182	3	M., W., F., at 10		Walradt
—183	3	M., W., F., at 9	P. 7	Hammond
—184	3	M., W., F., at 2	P. 6	Huntington
185—186	3	M., W., F., at 10	P. 7	Hagerty
—188	2	Tu., Th., at 8	P. 13	Ruggles
189—	2	Tu., Th., at 8	P. 6	
—190	2	Tu., Th., at 8	P. 9	Huntington
203—204	3	M., Th., F., at 11	L. 305	
207—208	2	Th., 4 to 6	L. 305	
209—210	1 to 3	To be arranged	P.	Hammond
211—212	1 to 3	To be arranged	P.	Ruggles
213—214	1 to 3	To be arranged	P.	Lockhart
215—216	2	To be arranged		Mark

SOCIOLOGY

101—102	3	M., W., F., at 8		All Instructors
		M., W., F., at 8		
		M., W., F., at 9	L. 307	
		M., W., F., at 9		
		M., W., F., at 10		
		M., Tu., F., at 11	P. 7	
		M., Tu., F., at 11		
		M., W., F., at 1	P. 7	
		M., W., F., at 2		
		M., W., F., at 3		
102—101	3	M., W., F., at 10		
		M., W., F., at 2		
—104	3	M., W., F., at 3	Ph. 294	Taft
105—	3	M., W., F., at 3	P. 9	Taft

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
107—	3	M., W., F., at 2		McKenzie
—108	1	Tu., at 8	Arch. M.	Mills
109—	4	M., W., F., at 8 Lab., S., 9 to 12	P. 9	Hagerty
111—	3	M., W., F., at 10	P. 9	Bice
—112	4	M., W., F., at 8 Lab., S., 9 to 12	P. 9	Hagerty
—114	3	M., W., F., at 9		Bice
115—116	4	To be arranged		Mark
117—118	2	Tu., 4 to 6	P. 7	Hagerty
119—	3	M., Th., F., at 11	P. 13	
123—124	3	M., W., F., at 3	P. 6	
125—126	3	M., W., F., at 1		McKenzie
127—128	3	M., W., F., at 10		North
129—130	3	M., W., F., at 2	P. 7	North
131—132	3	M., W., F., at 9		Hagerty
133—	3	M., W., F., at 10		
201—202	2	To be arranged		McKenzie
207—208	2	Th., 4 to 6	P. 7	

ENGINEERING DRAWING

101—	2	M., W., 8 to 10 M., W., 1 to 3 Tu., Th., 8 to 10 Tu., Th., 1 to 3 F., S., 8 to 10	Br. 203 Br. 203, 200 H. F. Br. 203, 200 Br. 104, H. F.	All Instruc- tors
—101	2	F., S., 8 to 10		
102—	3	M., at 8 M., 9 to 11; Tu., 8 to 10	Br. 200	
—102	3	L., M., at 2 M., at 9 W., at 10 W., at 3 F., at 8 F., at 10 F., at 1 F., at 2 F., at 3 Lab., M., W., 8 to 10 M., W., 1 to 3 Tu., Th., 8 to 10 Tu., Th., 1 to 3 F., S., 8 to 10	Br. 203, 1 Br. 203 Br. 203, 200 Br. 203 Br. 203, 200 Br. 200, 104 Br. 203, 200 Br. 200, 1 Br. 203 Br. Br. Br. Br. Br.	All Instruc- tors
103—	3	L., M., W., at 2 Tu., Th., at 8 Tu., Th., at 9 Tu., Th., at 10	Br. 1, 12 Br. 203 Br. 203, 200 Br. 203	All Instruc- tors

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., at 3	Br. 203, 200	
		Lab., M., 1 to 3	Br.	
		W., 1 to 3	Br.	
		Th., 8 to 10	Br.	
		F., 10 to 12	Br.	
—104	3	L., M., at 10	Br. 203	Williams
		M., at 3	Br. 200	Williams
		Tu., at 8	Br. 203	Svensen
		Tu., at 3	Br. 203	Withrow
		Lab., M., Tu., 8 to 10	H. F.	
		W., Th., 8 to 10	H. F.	
		Tu., W., 1 to 3	H. F.	
		F., 1 to 3; S., 8 to 10	H. F.	
105—	3	L., M., W., at 10	Br. 203	Turnbull
		M., W., at 2	Br. 203	Turnbull
		Lab., F., 10 to 12	Br.	
		F., 1 to 3	Br.	
—106	3	L., Tu., Th., at 8	Br. 12	Turnbull
		M., W., at 1	Br.	Turnbull
		Lab., Tu., 9 to 11	Br.	
		M., 2 to 4	Br.	
107—	3	L., Tu., Th., at 2	Br. 203	Meiklejohn
		Lab., Tu., 8 to 10	Br.	
		F., 10 to 12	Br.	
108—	3	Tu., Th., at 8; Th., 1 to 4	Br. 200	French
—110	2	M., Tu., 8 to 10	H. F.	Williams
		W., Th., 10 to 12	H. F.	
111—	2	M., Tu., 8 to 10	Br.	Williams, Svensen
		M., Tu., 1 to 3	Br.	
		Th., F., 1 to 3	Br.	
121—122	2	M., Tu., 1 to 3	Br.	Withrow, Svensen
125—125	2	L., Tu., at 1	Br. 104	French
		Th., at 9	Br. 104	Meiklejohn
		Th., at 1	Br. 104	Withrow
		F., at 10	Br. 203	
		Lab., W., 8 to 11	Br.	
		W., 1 to 4	Br.	
		F., 8 to 11	Br.	
		F., 1 to 4	Br.	
127—	1½	S., 8 to 11	Br. 203	French, Turnbull
—128	1½	S., 8 to 11	Br. 203	French
129—	1	S., 8 to 10	Br.	
—130	2	S., 8 to 12	Br.	
131—132	3	M., W., 1 to 4	Br.	French
139—	4	Th., F., 1 to 4	Br.	Svensen
—140	3	Th., F., 1 to 4	Br.	Svensen

ENGLISH

Course No.	Hours	Time	Room	Instructor
101—104	2	M., W., at 9	Ph. 5	All Instructors
		M., W., at 8	Ph. 104	
		Tu., Th., at 8	Ph. 202, 104, 204	
		Tu., Th., at 9	Ph. 202, 104, 102	
		Tu., Th., at 10	U. 312; P. 7, 12	
		Tu., Th., at 11	Ph. 202	
		Tu., Th., at 1	Ph. 202, 104, 204	
		Tu., Th., at 2	Ph. 102, 104, P. 9, P. 13	
		Tu., Th., at 3	Ph. 202, 104, 302, 204	
		Tu., Th., at 4	Ph. 104	
104—101	2	Tu., Th., at 8	Ph. 102	Besk Dishong Graves McKnight McKnight Taylor Graves Percival Percival Taylor Cooper Cooper Percival Percival Taylor Beck McKnight Graves McKnight Taylor Graves Andrews Denney Cooper Denney Denney Taylor
		Tu., Th., at 1	Ph. 102	
		Tu., Th., at 4	Ph. 102	
105—106	2	Tu., Th., at 10	Ph. 104	
		M., W., at 2	Ph. 303	
107—108	2	Tu., Th., at 10	Ph. 204	
127—128	2	Tu., Th., at 10	Ph. 202	
		M., W., at 2	Ph. 104	
133—133	3	M., W., F., at 10	Ph. 104	
		M., W., F., at 3	Ph. 302	
—136	3	M., W., F., at 1	Ph. 104	Percival Percival Taylor Cooper Cooper Percival Percival Taylor Beck McKnight Graves McKnight Taylor Graves McKnight Graves Andrews Denney Cooper Denney Denney Taylor
137—	3	M., W., F., at 1	Ph. 104	
141—142	3	M., W., F., at 9	Ph. 102	
		M., W., F., at 10	Ph. 304	
		M., W., F., at 1	Ph. 102	
		M., W., F., at 3	Ph. 303	
143—144	3	M., W., F., at 2	Ph. 102	
145—146	3	M., W., F., at 8	Ph. 204	
		M., W., F., at 10	Ph. 204	
		M., W., F., at 1	Ph. 204	
		M., W., F., at 2	Ph. 302	Graves McKnight Graves McKnight Taylor Graves Andrews Denney Cooper Denney Denney Taylor
151—152	3	M., W., F., at 3	L. 104	
155—156	3	M., W., F., at 2	Ph. 204	
157—158	3	M., W., F., at 9	Ph. 204	
159—160	2	Tu., Th., at 2	Ph. 303	
163—166	3	M., W., F., at 2	L. 104	
167—168	3	M., W., F., at 10	Ph. 102	
169—170	3	M., W., F., at 9	Ph. 104	
181—	2	Tu., Th., at 10	Ph. 102	
201—202	2	W., 4 to 6	L. 105	
—204	2	To be arranged		Denney Denney Taylor
205—206	2	M., 4 to 6	L. 104	
207—208	2	Tu., 4 to 6	L. 104	

ENGLISH—Continued

Course No.	Hours	Time	Room	Instructor
209—210	2	Tu., 4 to 6	L. 105	McKnight
213—214	2	Th., 4 to 6	L. 104	Cooper
215—216	2	Th., 4 to 6	Ph. 204	
217—218	2	Th., 4 to 6	L. 105	Percival
219—220	2	W., 4 to 6	L. 104	Denney

For Short Courses Only

91—92	2	Tu., Th., at 8	Ph. 5	Dishong
		Tu., Th., at 10	Ph. 5	Dishong
		Tu., Th., at 2	Ph. 5	Dishong
		Tu., Th., at 3	Ph. 5	Dishong

PUBLIC SPEAKING (See Public Speaking)

EUROPEAN HISTORY

101—102	3	M., W., F., at 8	U. 201	All Instruc- tors
		M., W., F., at 8	U. 202	
		M., W., F., at 9	U. 201	
		M., W., F., at 10	U. 201	
		M., W., F., at 1	U. 201	
		M., W., F., at 1	U. 202	
		M., W., F., at 2	U. 201	
		M., W., F., at 3	U. 201	
		M., W., F., at 4	U. 201	
102—101	3	M., W., F., at 8	U. 316	
		M., W., F., at 1	H. F. 106	
103—104	3	M., W., F., at 9	U. 202	Perkins
		M., W., F., at 3	U. 202	Harris
105—106	3	M., W., F., at 9	U. 319	McNeal
107—108	2	Tu., Th., at 10	U. 201	McNeal
109—110	2	Tu., Th., at 11	L. 304	Siebert
113—114	3	M., W., F., at 10	U. 202	Siebert
115—116	2	Tu., Th., at 10	L. 107	Siebert
121—122	2	Tu., Th., at 9	U. 202	McNeal
123—124	3	M., W., F., at 2	U. 202	Perkins
125—126	2	Tu., Th., at 1	L. 307	Harris
129—130	2	Tu., Th., at 3	U. 202	All nstruc-
131—132	3	M., W., F., at 8	H. F. 106	tors
		M., W., F., at 10	H. F. 106	
		M., W., F., at 2	H. F. 106	
		M., W., F., at 3	H. F. 106	
—152	2	Tu., Th., at 9	L. 307	Siebert, Perkins
203—204	2 to 5	To be arranged		Siebert

FARM CROPS

Course No.	Hours	Time	Room	Instructor
101—	4	M., Th., F., at 11	H. F. 108	
		Lab., Th., 1 to 3	H. F.	
		F., 1 to 3	H. F.	
—101	4	M., W., F., at 3	H. F. 108	
		Lab., Th., 8 to 10	H. F.	
		F., 8 to 10	H. F.	

GEOLOGY

101—102	3	M., W., F., at 8	O. 1	Hills
		M., W., F., at 9	O. 1	Hills
		M., W., F., at 1	O. 105	Bownocker
		M., W., F., at 2	O. 105	Cottingham
103—	3	M., W., F., at 10	O. 105	Bownocker
—104	3	M., W., F., at 10	O. 105	Carman
105—	3 to 5	To be arranged; field trips Saturday		Carman
—106	3	To be arranged; field trips Saturday		Hills
107—108	2 to 5	To be arranged		Carman
111—	3	Tu., Th., 8 to 11 and 1 to 5	O.	Hills
113—114	2 to 5	To be arranged		Carman, Hills
116—	3	To be arranged		Hills
121—122	3	M., W., F., at 10	O. 1	Tucker
—128	3	M., W., F., at 4	O. 105	
141—142	2 to 5	To be arranged	O.	Bownocker, Carman, Hills
151—151	Agr. 3	L.. Tu., Th., at 8	O. 105, 2nd sem. 1	Bevan
		Tu., Th., at 9	O. 105	
		Tu., Th., at 10	O. 1, 2nd sem. 105	
		Tu., Th., at 1	O. 105, 2nd sem. 1	
		Tu., Th., at 2	O. 105	
		Tu., Th., at 3	O. 105	Cottingham
		Lab., W., 8 to 10	O.	
		W., 1 to 3	O.	
		F., 8 to 10	O.	
		F., 10 to 12	O.	Cottingham
		F., 1 to 3	O.	
—162	4	M., W., F., at 9	O. 105	
165—	3	Tu., Th., at 10	O. 105	Bevan
		Lab., F., 10 to 12	O.	
—165	3	W., F., at 10	O.	Bownocker
		Lab., M., 2 to 4		
—166	2	Tu., at 9; W., 2 to 4		Bownocker

GEOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
167—	3	M., W., F., at 8	O. 105	Bownocker
168—	3	L., M., Th., at 11	O. 105	Bevan
		Lab., Tu., 2 to 4		
		L., Tu., Th., at 9	O. 1	
		Lab., Th., 2 to 4		
—168	3	L., Tu., Th., at 9	O. 1	Carman
		Lab., Th., 2 to 4	O.	Carman
—170	3	M., W., F., at 8	O. 105	Bownocker
175—176	2	M., W., at 4	O. 1	Hills
201—202	3 to 5	To be arranged		Bownocker,
				Carman
203—204	3 to 5	To be arranged		Carman

GERMAN

101—102	4	M., Tu., W., Th., at 9	U. 320	Evans
		M., Tu., W., Th., at 10	U. 320	Eisenlohr
		M., Tu., W., Th., at 1	U. 320	Kotz
		M., Tu., W., Th., at 2	H. F. 113	Thomas
—101	4	M., Tu., W., Th., at 3	H. F. 107	Kotz
102—103	4	M., Tu., W., Th., at 3	U. 320	Barrows
103—104	4	M., Tu., W., Th., at 3	U. 319	Thomas
103—106	4	M., Tu., W., Th., at 8	U. 319	Eisenlohr
		M., Tu., W., Th., at 10	H. F. 107	Evans
		M., Tu., W., Th., at 1	U. 319	
106—	4	M., Tu., W., Th., at 3	H. F. 107	Kotz
107—108	4	M., Tu., W., Th., at 10	U. 319	Barrows
115—116	3	M., W., F., at 2	U. 319	Kotz
117—118	2	Tu., Th., at 10	H. F. 113	Thomas
131—132	2	Tu., Th., at 9	U. 319	Eisenlohr
—152	3	Tu., Th., F., at 11	U. 319	Evans
159—	2	Tu., Th., at 11	U. 319	Evans
175—176	2	Tu., Th., at 2	U. 319	Barrows
181—182	2	To be arranged	U. 317	Barrows
201—202	2	M., 4 to 6	L. 303	Eisenlohr
—214	2	To be arranged	Ph.	Barrows
215—216	2	W., 4 to 6	L. 303	Evans

GREEK LANGUAGE AND LITERATURE

101—102	4	M., Tu., W., Th., at 1	U. 306	Bolling
109—110	2	To be arranged		
111—112	2	To be arranged		
113—114	2	To be arranged		
115—116	2	Tu., Th., at 10	U. 306	Bolling
119—120	2	To be arranged		
121—122	2 to 4	To be arranged		
123—124	2	M., W., at 10	U. 306	Bolling
125—126	4	M., Tu., W., Th., at 2	U. 306	Bolling
129—130	3	To be arranged		Bolling
131—132	1	To be arranged		Bolling

HISTORY AND PHILOSOPHY OF EDUCATION

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 10	Ha. 101	Anderson
		M., W., F., at 4	Ha. 101	Anderson
102—		M., Th., F., at 11	Ha. 101	
—101		M., Th., F., at 11	Ha. 101	
103—104	2	Tu., Th., at 10	Ha. 101	Anderson
105—106	2	Tu., Th., at 9	Ha. 101	Anderson
107—108	2	M., W., at 3	Ha. 101	Anderson
109—110	2	Tu., Th., at 3	Ha. 101	Anderson
—112	2	Tu., Th., at 2	Ha. 101	Anderson
201—202	2	Tu., 4 to 6	Ha. 101	Anderson
203—204	2	To be arranged		Anderson
—206	1	M., at 9	Ha. 101	Anderson

HOME ECONOMICS

101—102	5	L., M., W., at 9	H. E. 203	White
		M., W., at 2	H. E. 102	White
		Q., Th., at 10	H. E. 102	White, and
		F., at 8	H. E. 102	department
		F., at 10	H. E. 321	assistants
		F., at 1	H. E. 102	
		Lab., (101-102) M., W., 1 to 3	H. E.	
		(101-102) Tu., Th., 8 to 10		
		1st sem. (101)		
		M., W., 9 to 11		
		2nd sem. (102)		
		Tu., Fr., 10 to 12		
		1st sem. (101)		
		Tu., Th., 1 to 3		
		2nd sem. (102)		
		Tu., Th., 3 to 5		
104—	3	M., W., F., at 4	H. E. 203	Linder
—104	3	M., W., F., at 4	H. E. 203	Linder
105—106	2 to 5	W., at 10	H. E. 218	Van Meter
		Lab. to be arranged	H. E. 301, 302	
—108	2	Tu., Th., at 9	H. E. 102	Van Meter, Hathaway, Adams
110—	4	Tu., Th., at 8	H. E. 203	Skinner
		Lab., M., W., 1 to 3	H. E. 204	
—110	4	Tu., Th., at 9	H. E. 203	Skinner
		Lab., Tu., Th., 10 to 12	H. E. 204	
		M., W., at 1	H. E. 203	Skinner
		Lab., M., W., 2 to 4	H. E. 204	
111—112	2	L., M., at 9	H. E. 321	Walker
		M., at 2	H. E. 218, 321	Tucker

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., at 8	H. E. 218	Walker
		Tu., at 2	H. E. 218	Walker
		Th., at 9	H. E. 218, 321	Walker
		Th., at 1	H. E. 218	Walker
		Lab., Tu., 8 to 11	H. E. 215, 216,	
		W., 8 to 11	217	
		W., 1 to 4		
		Th., 1 to 4		
		F., 8 to 11		
		F., 1 to 4		
113—	3	L., Th., at 10	H. E. 203	Hathaway
		Lab., Tu., F., 10 to 12	H. E. 113, 114	
		Tu., Th., 1 to 3		
		M., W., 1 to 3		
—113	3	L., Th., at 11	H. E. 102	Hathaway
		Tu., F., 10 to 12	H. E. 113, 114	
—116	3	L., Th., at 10	H. E. 203	Hathaway
		M., W., 1 to 3	H. E. 113	
		M., W., 8 to 10	H. E. 113, 114	
118—118	3	F., at 11; Tu., Th., 10 to 12	H. E. 218, 211	Tucker
		F., at 3; Tu., Th., 2 to 4	H. E. 218	Tucker
119—	3	M., W., at 3; F., 2 to 4	H. E. 218	Walker
—119	3	M., W., at 9; F., 10 to 12	H. E. 218	Walker
		M., W., at 3; F., 2 to 4	H. E. 218	Walker
121—	3	M., at 10	H. E. 218	Skinner
		Lab., Tu., Th., 8 to 10	H. E. 302	
		M., W., 2 to 4	H. E. 302	
123—124	2	Tu., at 11;	H. E. 203	Adams
		Lab. to be arranged		
125—126	3	To be arranged		White
201—202	2 to 5	To be arranged		White

HORTICULTURE

101—	4	M., W., F., at 10	H. F. 113	
		Lab., Tu., 1 to 3		
		Th., 1 to 3		
—120	4	M., W., F., at 10	H. F. 113	
		Lab., Tu., 1 to 3		
		Th., 1 to 3		
—156	2	M., W., at 8	H. F. 107	
—184	3	L., M., W., F., at 8	H. F. 112	Scherer

INDUSTRIAL EDUCATION

111—112	3	M., Th., F., at 11	S.	Usry
117—118	2	L., Th., at 10	S.	Usry
		Lab., F., 1 to 4	S.	Usry
121—122	2	To be arranged	S.	Usry

INDUSTRIAL EDUCATION—Continued

Course No.	Hours	Time	Room	Instructor
123—123	2	M., W., at 10	S.	Usry
125—125	2	W., 1 to 4; S., 8 to 11	S.	Usry, Smith
127—123	3	M., W., 1 to 4	S.	Usry, Smith
129—129	2	M., W., F., 9 to 11	S.	Usry, Smith
131—131	3	W., 1 to 4; S., 8 to 11	S.	Usry, Smith

JOURNALISM

101—102	3	M., W., at 9	S. 208	Myers
		M., W., at 1	S. 208	Myers
		Agr. Tu., at 11	S. 208	Baker
		Lab. to be arranged		
102—101	3	Tu., Th., at 9	S. 201	Myers
103—104	3	M., W., F., at 8	S. 208	Hooper
105—106	3	Tu., Th., at 11;	S. 208	Myers
		Lab. to be arranged		
107—108	3	M., W., F., at 10	S. 208	Hooper
109—110	2	Tu., at 10; Lab. to be arranged	S. 208	Myers
113—	2	Tu., Th., at 8	S. 208	Myers
115—116	2	Tu., Th., at 9	S. 208	Hooper
—119	2	Tu., Th., at 8	S. 208	Myers

LATIN

101—102	4	M., Tu., W., Th., at 9	U. 306	
		M., Tu., W., Th., at 10	H. F. 203	Elden
		M., Tu., W., Th., at 3	U. 316	
103—104	3	M., W., F., at 10	U. 316	Hodgman
		M., W., F., at 2	U. 316	Elden
105—106	2	Tu., Th., at 9	U. 316	Elden
107—108	1	M., at 4	U. 316	Dunlap
109—110	1 or 2	W., F., at 4	U. 316	Derby
111—112	1	M., at 3	U. 306	Elden
113—114	3	M., W., F., at 9	U. 316	Elden
115—116	3	M., Th., F., at 11	U. 316	Hodgman
119—120	1 or 2	Tu., at 4	U. 312	Hodgman
121—122	2 to 5	Tu., Th., at 4	U. 316	Derby
123—124	1	Tu., at 3	U. 312	Hodgman
125—126	1	W., at 3	U. 306	Elden
129—130	2	Tu., Th., at 10	U. 209	Hodgman
131—132	1 or 2	To be arranged		Dunlap
147—148	4	M., Tu., W., Th., at 1	H. F. 107	Dunlap
149—150	4	M., Tu., W., Th., at 2	H. F. 107	
201—202	1	To be arranged		Hodgman
203—204	1	F., at 3	U. 316	Elden
213—214	2 or 3	M., F., at 11	L. 311	Derby

MATHEMATICS

Course No.	Hours	Time	Room	Instructor
107—107	3	M., W., F., at 8	U. 310	Ricard
		M., W., F., at 9	U. 310	Rasor
		M., W., F., at 10	U. 312	Bohannon
		M., W., F., at 1	U. 310	Bareis
		M., W., F., at 2	U. 310	Rasor
		M., W., F., at 3	U. 312	Arnold
121—122	3	M., W., F., at 8	U. 306	
		M., W., F., at 9	U. 308	Swartzel
		M., W., F., at 1	U. 316	Arnold
		M., W., F., at 2	U. 320	Weaver
125—126	2	Tu., Th., at 3	L. 306	Arnold
127—128	3	M., W., F., at 1	U. 311	Kuhn
129—130	3	M., W., F., at 8	U. 313	
		M., W., F., at 1	U. 313	
131—132	5	Daily at 8	U. 309	All Instructors
		Daily at 8	U. 312	
		Daily at 9	U. 309	
		Daily at 9	U. 311	
		Daily at 10	U. 308	
		Daily at 10	U. 310	
		Daily at 1	U. 309	
		Daily at 1	U. 308	
		Daily at 1	U. 312	
		Daily at 2	U. 312	
		Daily at 2	H. F. 205	
		Daily at 3	U. 309	
		Daily at 3	U. 311	
132—131	5	Daily at 8		
		Daily at 2		
		Daily at 3	Lo. 232	
135—	3	M., W., F., at 2	U. 313	
141—142	5	Daily at 8	Lo. 232	All Instructors
		Daily at 8	U. 311	
		Daily at 9	U. 312	
		Daily at 10	U. 311	
		Daily at 10	U. 313	
		Daily at 1	H. F. 205	
		Daily at 2	U. 308	
		Daily at 2	U. 309	
		Daily at 3	U. 310	
		Daily at 3	H. F. 205	
		Daily at 10	H. F. 205	
142—141	5	Daily at 8	U. 308	Bareis
				Ricard
149—150	3	To be arranged		Weaver
151—	1	Tu., at 11	U. 312	Bohannon
165—166	3	M., Th., F., at 11	U. 310	Morris
167—168	3	M., Th., F., at 11	U. 312	Bohannon
171—172	3	M., W., F., at 2	U. 311	Bareis

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
173—174	3	M., W., F., at 10	L. 306	Kuhn
—181	3	M., W., F., at 3	U. 313	
183—184	2	M., F., at 11	U. 313	
185—186	2	Tu., Th., at 2	U. 310	Arnold
187—	3	M., W., F., at 3	U. 313	
—190	2	M., W., at 2	U. 313	
201—202	3	M., W., F., at 1	L. 306	Rasor
203—204	3	M., Th., F., at 11	U. 311	Swartzel
205—206	3	To be arranged		Bohannan
207—	3	To be arranged		Arnold
209—210		To be arranged		
211—212		To be arranged		Kuhn
213—214		To be arranged		Rasor
215—216		To be arranged		
217—218		To be arranged		Swartzel
219—220		To be arranged		
221—222		To be arranged		Kuhn

MECHANICS

101—102	5	Daily at 8	U. 308	Boyd
		Daily at 9	Lo. 232	Draffin
		Daily at 10	Lo. 232	Boyd
		Daily at 1	Lo. 232	Coddington
		Daily at 2	Lo. 232	Coddington
103—	5	Daily at 11	Lo. 232	Boyd
—104	2	Tu., Th., at 11	Lo. 107	Draffin
201—202	3	To be arranged		Boyd, Coddington

MILITARY SCIENCE AND TACTICS

1—1	1	M., Tu., Th., F., at 11 Tu., W., Th., at 4; Th. at 11	Ha.	Leonard, Halstead
2—2	1	M., Tu., F., at 11 Tu., W., Th., at 4	Ha.	Leonard, Halstead

MINERALOGY

102—	3	M., W., F., at 8	Lo. 107	McCaughey
—102	3	M., W., F., at 8	Lo. 107	McCaughey
		M., W., F., at 9	Lo. 107	McCaughey
—104	3	Th., F., 1 to 4	Lo. 107	McCaughey
105—	2	To be arranged		McCaughey
121—	3 to 5	To be arranged	Lo.	McCaughey
123—124	5	To be arranged	Lo.	McCaughey
—126	3	To be arranged	Lo.	McCaughey

PHILOSOPHY

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 8	U. 320	Avey
		M., W., F., at 9	U. 321	Leighton
		M., W., F., at 10	L. 307	Williams
		M., W., F., at 1	U. 321	Williams
102—101	3	M., W., F., at 2	L. 307	Chandler
105—106	3	M., W., F., at 8	U. 321	Williams
	3	M., W., F., at 3	L. 107	Chandler
107—108	3	M., W., F., at 10	U. 200	Chandler
		M., W., F., at 2	U. 321	Avey
109—	3	M., W., F., at 1	L. 307	Leighton
111—	3	M., W., F., at 3	U. 321	Williams
113—114	2	Tu., Th., at 9	U. 321	Avey
115—116	2	Tu., Th., at 10	U. 321	Chandler
—118	3	M., W., F., at 9	L. 307	Leighton
121—122	3	M., W., F., at 10	U. 321	Leighton
123—124	3	M., W., F., at 9		Chandler
—128	3	To be arranged		Chandler
—132	3	M., W., F., at 3	L. 307	Williams
—134	3	M., W., F., at 1		Leighton
138—139	2	Tu., Th., at 11	U. 320	Williams
147—148	2	Tu., Th., at 2	U. 321	Avey
—150	2	Tu., Th., at 1	U. 321	Williams
153—154	2	M., F., at 11	U. 321	Avey
201—202	3 to 6	To be arranged		
207—208	3 to 6	To be arranged		
209—210	2	To be arranged		

PHYSICAL EDUCATION

FOR MEN

101—102	1	Tu., Th., at 10	Nichols and
		M., W., at 10	All In-
		M., F., at 10	structors
		W., F., at 10	
		Tu., Th., at 11	
		Tu., Th., at 2	
		M., W., at 2	
		M., F., at 2	
		W., F., at 2	
		Tu., Th., at 3	
		M., W., at 3	
		M., F., at 3	
		W., F., at 3	
		Tu., Th., at 4	
		M., W., at 4	
		M., F., at 4	
		W., F., at 4	

(Hours to be arranged for corrective work)

PHYSICAL EDUCATION—Continued

Course No.	Hours	Time	Room	Instructor
107—	2	Tu., Th., at 3	Ath. House	St. John, Wilce, Castleman
—110	2	M., Th., at 11	Ath. House	Wilce
111—	1	Tu., at 4	P. 109	Castleman
—112	1	Tu., at 4	P. 109	Wilce
113—	1	Th., at 4	P. 109	St. John
—120	2	Tu., F., at 11		Castleman
—122	2	L., M., at 4		
		Lab., Tu., Th., at 5		Bird
125—	2	Tu., F., at 11		

FOR WOMEN

131—132	1	Tu., at 11; 3 hours to be arranged		Meyer, Hammett
133—134	1	4 hours to be arranged		Meyer, Hammett
135—136	3	Tu., Th., 9 and 3		Meyer, Hammett

PHYSICS

103—104	4	M., W., F., at 8	Ph. 205	Earhart
		M., W., F., at 3	Ph. 205	Earhart
		Lab., W., 9 to 11	Ph.	
		W., 1 to 3		
105—106	4	M., W., F., at 10	Ph. 205	Earhart, Blake
		M., W., F., at 3	Ph. 200	Earhart, Blake
		Lab., Tu., 8 to 11		
		Tu., 1 to 4		
		Th., 8 to 11		
		Th., 1 to 4		
109—109	3 Agr.	M., W., F., at 8	Ph. 202	Cole
		M., W., F., at 9	Ph. 202	Cole
		M., W., F., at 10	Ph. 202	Cole
		M., W., F., at 1	Ph. 202	Cole
		M., W., F., at 2	Ph. 202	Cole
		M., W., F., at 3	Ph. 202	Cole
111—112	3 Cer.	Tu., Th., at 9; S., 8 to 10	Ph. 205	
		(1st Sem.)		
		M., 2 to 4 (2nd Sem.)		
	Civil	Tu., Th., at 10; W., 2 to 4	Ph. 205	
		(1st Sem. only)		
	Chem.	M., W., at 1; F., 8 to 10	Ph. 205	
		Th., 10 to 12		
		(1st Sem.)		

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., 8 to 10		
		Tu., 10 to 12		
		(2nd Sem.)		
	Mine	Tu., Th., at 10; S., 8 to 10	Ph. 205	
		(1st Sem.)		
		M., 10 to 12 (2nd Sem.)		
	Arch. Engr.	M., W., at 1; Tu., 10 to 12	Ph. 205	
—111	3	To be arranged	Ph.	Cole
113—	5 Mech.	L., M., Tu., W., Th., at 8	Ph. 200	All Instructors
		Lab., Th., 2 to 4		
		L., M., Tu., W., Th., at 1	Ph. 200	
		Lab., F., 10 to 12		
	Elec.	L., M., Tu., W., Th., F.,	Ph. 200	
		at 9		
		L., M., Tu., W., Th., F.,	Ph. 205	
		at 2		
	Gen.	L., M., Tu., W., Th., at 1	Ph. 200	
		Lab., F., 8 to 10		
—114	4 Elec.	L., M., Tu., W., Th., at 9	Ph. 200	
	Gen.	L., M., Tu., W., Th., at 1	Ph.	
	Elec.	L., M., Tu., W., Th., at 2	Ph. 205	
115—116	2	To be arranged	Ph.	Earhart, Smith, Heil
117—118	2 Arch.	Tu., Th., at 1	Ph. 301	All Instructors
—119	3 Mech.	M., W., F., at 9	Ph. 205	
		M., W., F., at 2	Ph. 200	
—120	2	To be arranged	Ph.	Cole
121—122	3 to 5	M., Tu., 1 to 4	Ph.	Smith
123—124	3 to 5	M., Tu., 1 to 4	Ph.	Smith
—125	5 Civil	L., M., Tu., W., Th., at 10	Ph. 200	
		Lab., Tu., 2 to 4		
		L., M., Tu., W., Th., at 2	Ph. 301	
		Lab., W., 8 to 10		
133—	2 Elec.	M., Tu., 8 to 10	Ph.	Smith, Heil
		W., Th., 8 to 10	Ph.	Smith, Heil
		M., Tu., 2 to 4	Ph.	Smith, Heil
—134	4 Elec.	F., at 10; M., Tu., 1 to 4	Ph. 301	Alpheus Smith
		M., at 3; F., S., 8 to 11	Ph. 301	Alpheus Smith
		F., at 2; W., Th., 8 to 11	Ph. 301	Alpheus Smith
135—	5 Elec.	Tu., Th., at 1	Ph. 205	Alpheus Smith
		Tu., Th., at 3	Ph. 301	Alpheus Smith
		Lab., W., Th., 8 to 11		
		F., S., 8 to 11		
—136	4	To be arranged	Ph.	
137—	3 to 5	To be arranged	Ph.	Alva Smith
—138	2 Mech.	W., Th., 2 to 4	Ph.	Blake, Heil
		F., S., 8 to 10	Ph.	Smith, Heil

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
139—140	3 to 5	To be arranged	Ph.	Alva Smith
143—144	3	To be arranged	Ph.	Cole, Earhart
145—146	1	Tu., at 11	Ph. 205	Cole
201—202	3 to 5	To be arranged	Ph.	
205—206		To be arranged	Ph.	
211—212		To be arranged	Ph.	
213—214		To be arranged	Ph.	

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND
PHARMACOLOGY

101—102	3	M., W., F., at 3	Bio. 200	All Instructors
		M., W., F., at 9	Bio. 200	
		M., W., F., at 10	Bio. 200	
		M., W., F., at 1	Bio. 200	
		M., W., F., at 2	Bio. 200	
		M., W., F., at 3	Bio. 200	
—104	3	Tu., Th., 8 to 11	Bio. 208	Bleile
—106	5	Tu., Th., F., 1 to 4	Bio. 201-8	Bleile, Seymour, Durrant
107—	3	M., W., F., at 9	Bio. 101	Durrant
109—110	3	To be arranged	Bio.	Bleile, Seymour, Durrant
111—112	5	To be arranged	Bio.	Bleile, Seymour, Durrant
114—	3	Tu., 1; Th., at 11	Bio. 100	
		Lab., Tu., 2 to 5		
115—	3	M., F., at 11	Bio. 200	Bleile
		Lab. to be arranged		
—118	3	M., F., at 11	Bio. 200	Durrant
		Lab. to be arranged		
119—120	3	M., W., F., at 2	Bio. 100	Bleile
121—122	5	To be arranged	Bio.	Brooks
123—	4	To be arranged	Bio.	Brooks, Seymour
—130	4	To be arranged		McPeck
—132	3	M., W., F., at 1	Bio. 101	Bleile
		For Pre-Medics		
135—136	4	L., Tu., Th., at 9	Bio. 200	Bleile
		Lab., Tu., Th., 1 to 3		Durrant
201—202	3	To be arranged	Bio.	Bleile
203—204	5 to 10	To be arranged	Bio.	

POLITICAL SCIENCE

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 8	U. 200	
		M., W., F., at 9	U. 200	
		M., W., F., at 2	U. 200	
		M., W., F., at 3	U. 200	
—101	3	M., W., F., at 1	U. 200	Coker
106—	3	M., W., F., at 10	L. 303	Cottrell
113—114	2	Tu., Th., at 3	U. 200	
115—116	2	Tu., Th., at 10	U. 200	Coker
117—118	2	Tu., 4 to 6	L. 303	Coker
125—126	3	M., W., F., at 8	L. 307	Spencer
—130	3	M., W., F., at 10	L. 303	Cottrell
131—132	2	Tu., Th., at 9	U. 200	Coker
151—152	2	W., 3 to 5		Cottrell
201—202	2	To be arranged		Coker, Cottrell

PRINCIPLES AND PRACTICE OF EDUCATION

101—	3	M., W., F., at 10	Ha. 208	Clifton
		M., W., F., at 2	Ha. 208	Clifton
104—104	3	Two consecutive hours daily; to be arranged		
105—106	3	Tu., Th., 4 to 5:30	Ha. 208	Clifton
111—112	3	To be arranged		

PSYCHOLOGY

101—102	3	M., W., F., at 8	U. 406	All Instruc-
		M., W., F., at 8	U. 401	tors
		M., W., F., at 9	U. 401	
		M., W., F., at 9	U. 410	
		M., W., F., at 9	U. 412	
		M., W., F., at 10	U. 400	
		M., W., F., at 10	U. 401	
		M., W., F., at 10	U. 406	
		M., W., F., at 1	U. 412	
		M., W., F., at 1	U. 406	
		M., W., F., at 2	U. 406	
		M., W., F., at 2	U. 401	
		M., W., F., at 3	U. 406	
		M., W., F., at 4	U. 412	
102—101	3	M., W., F., at 9	U. 400	
		M., W., F., at 3	U. 412	
103—104	3	Tu., Th., at 9	U. 415	Weiss
		Lab., W., 1 to 3		
107—108	2	M., F., at 11	U. 401	Pintner
		Tu., Th., at 9	U. 400	Evans
		Tu., Th., at 10	U. 406	Goudge-Crane

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., at 4	U. 410	Coy
108—107	2	Tu., Th., at 3	U. 410	Coy
111—112	3	Tu., at 1	U. 415	Weiss
		Lab., Tu., 2 to 4		
		Th., 1 to 3		
—114	2	Tu., Th., at 10	U. 410	Weiss
115—116	2	Tu., Th., at 10	U. 401	Evans
118—	2	Tu., Th., at 10	U. 410	Weiss
121—122	4	M., W., F., at 9; S., 9 to 11	U. 406	Bridges, Pintner
—124	2	Tu., Th., at 9	U. 406	Bridges
125—126	3	M., W., F., at 10	U. 410	Evans
—127	2	M., F., at 11	U. 406	Bridges
128—	2	M., F., at 11	U. 406	Crane
129—130	2	M., F., at 11	U. 410	Arps
133—134	3	M., W., F., 1 to 3	U. 408	Pintner
137—138	2	Th., 4 to 6	L. 309	Arps
139—140	2	To be arranged		Arps
141—142	2 to 4	To be arranged		
147—148	1 or 2	M., W., F., 3 to 5	U. 408	Pintner, Evans
149—150	2	Tu., Th., at 11	U. 406	Crane
151—152	2	Tu., Th., at 2	U. 406	Crane
155—	2	M., at 11	U. 412	Evans
		Lab. to be arranged		
201—202	3 or more	To be arranged		
203—204	2	M., 7 to 9 P. M.	L. 309	
205—206	1	To be arranged		

PUBLIC HEALTH AND SANITATION

PUBLIC HEALTH

101—	2	To be arranged		
113—	2	Tu., Th., at 11		Hayhurst
121—122	2	Tu., Th., at 10	Bio. 101	Hayhurst
201—	2	Tu., Th., at 9		Hayhurst
—202	3	M., W., F., at 10		Hayhurst
—204	2	Tu., Th., at 8		
205—	2	Tu., Th., at 8		
207—208	2	Tu., Th., at 10		Paterson
209—210	3	M., W., F., at 9		
211—	4	M., Tu., Th., F., at 11		Van Buskirk
—212	4	M., Tu., Th., at 11; F., 1 to 4		Van Buskirk
213—214	3	Th., at 1; Tu., Th., 2 to 5		Van Buskirk
—216	1	M., 3 to 5		

PUBLIC HEALTH AND SANITATION—Continued

SCIENCE NURSING

Course No.	Hours	Time	Room	Instructor
—106	2	To be arranged		
—110	2	To be arranged		
111—	2	To be arranged		
113—	2	To be arranged		
115—	1	To be arranged		
117—	1	To be arranged		
119—	10	To be arranged		
—122	2	To be arranged		
—124	2	To be arranged		
125—	1	To be arranged		
127—	1	To be arranged		
129—	2	To be arranged		
131—	2	To be arranged		
133—	2	To be arranged		
135—	1	To be arranged		
137—	1	To be arranged		
139—	6	To be arranged		

PUBLIC SPEAKING

101—102	2	Tu., Th., at 8	Ph. 304	Ketcham
		Tu., Th., at 8	Ph. 302	Wiley
		Tu., Th., at 10	Ph. 304	Ketcham
		Tu., Th., at 10	Ph. 302	Wiley
		M., W., at 1	Ph. 304	Wiley
		Tu., Th., at 1	Ph. 304	Ketcham
		Tu., Th., at 1	Ph. 302	Wiley
		Tu., Th., at 2	Ph. 302	Wiley
101—		Tu., Th., at 9	Ph. 302	Wiley
107—108	3	M., at 3; W., 3 to 5	Ph. 304	Ketcham
—110	2	To be arranged		Ketcham
—114	2	M., W., at 10	Ph. 302	Wiley
121—122	2	Tu., Th., at 2	Ph. 304	Ketcham
125—126	2	Tu., Th., at 9	Ph. 304	Ketcham

ROMANCE LANGUAGES

FRENCH

101—102	4	M., Tu., W., Th., at 8	U. 303	All Instructors
		M., Tu., W., Th., at 8	H. F. 203	
		M., Tu., W., Th., at 9	H. F. 203	
		M., Tu., W., Th., at 9		
		M., Tu., W., Th., at 10	U. 303	
		M., Tu., W., Th., at 10	U. 302	
		M., Tu., W., Th., at 1	U. 303	
		M., Tu., W., Th., at 1	U. 302	

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
		M., Tu., W., Th., at 2	Br. 200	
		M., Tu., W., Th., at 2	H. F. 203	
		M., Tu., W., Th., at 3	U. 302	
		M., Tu., W., Th., at 3	H. F. 203	
		M., Tu., W., Th., at 4	U. 301	
		M., Tu., W., Th., at 4	U. 308	
—101	4	M., Tu., W., Th., at 3	H. E. 203	
102—103	4	M., Tu., W., Th., at 3	U. 301	
		M., Tu., W., Th., at 10		
103—104	4	M., Tu., W., Th., at 8	U. 302	All Instruc- tors
		M., Tu., W., Th., at 9	U. 302	
		M., Tu., W., Th., at 10	H. F. 108	
		M., Tu., W., Th., at 1	H. F. 203	
		M., Tu., W., Th., at 2	U. 303	
		M., Tu., W., Th., at 3		
		M., Tu., W., Th., at 4	U. 302	
104—	4	M., Tu., W., Th., at 3	H. E. 203	
—106	4	M., Tu., W., Th., at 10	Br. 1	Berthemy
107—	2	Tu., Th., at 9		Peirce
		Tu., Th., at 2	U. 209	Tailliant
—108	2	Tu., Th., at 9		Peirce
109—110	3	M., W., F., at 9	U. 301	Peirce
		M., Th., F., at 11	U. 301	Bowen
111—112	2	Tu., Th., at 10	U. 202	Hacker
113—114	2	Tu., Th., at 11	U. 321	Berthemy
119—120	2	Tu., 3 to 5	L. 311	Bowen
—122	2	W., 2 to 4	L. 311	Bowen
123—124	2	Tu., Th., at 9		Hacker

ITALIAN

101—102	4	M., Tu., W., Th., at 10	H. E. 321	Guigou
103—104	2	Tu., Th., at 2	U. 201	

SPANISH

101—102	4	M., Tu., W., Th., at 8	U. 301	All Instruc- tors
		M., Tu., W., Th., at 8	Ph. 303	
		M., Tu., W., Th., at 9	U. 303	
		M., Tu., W., Th., at 9	Ph. 303	
		M., Tu., W., Th., at 10		
		M., Tu., W., Th., at 10		
		M., Tu., W., Th., at 1	U. 301	
		M., Tu., W., Th., at 1		
		M., Tu., W., Th., at 2	U. 301	
		M., Tu., W., Th., at 2		
		M., Tu., W., Th., at 3	U. 303	
		M., Tu., W., Th., at 4	U. 303	
—101	4	M., Tu., W., Th., at 1		

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
102—103	4	M., Tu., W., Th., at 9 M., Tu., W., Th., at 2		
103—104	4	M., Tu., W., Th., at 10 M., Tu., W., Th., at 1 M., Tu., W., Th., at 4	U. 301 Ph. 303	Chapin Gutierrez
103—110	4	M., Tu., W., Th., at 8 M., Tu., W., Th., at 2	H. F. 108 U. 302	Chapin Chapin
105—106	3	M., Th., F., at 11	U. 303	Ingraham
107—108	2	Tu., Th., at 1		Ingraham
111—	2	Tu., Th., at 3		Ingraham
—112	3	M., W., F., at 1		Gutierrez

GRADUATE COURSES

Romance Languages

201—202	2	To be arranged		Bowen
203—204	1	To be arranged		Bowen
205—206	2	To be arranged		
207—208	3 to 10	To be arranged		Bowen
209—210	2 to 3	F., 2 to 4		Ingraham
211—212	2	To be arranged		Ingraham
213—	2	To be arranged		Hamilton
215—216	2	To be arranged	L. 311	Peirce
217—218	2	M., 3 to 5	L. 311	Bowen

RURAL ECONOMICS

101—101	2	Tu., at 10; W., 1 to 4 M., at 11; W., 8 to 11		Phillips
—110	3	M., W., F., at 9		Lantis

SCHOOL ADMINISTRATION

101—	3	M., W., F., at 9	Ha. 101	Brown
—101	3	M., W., F., at 9	Ha. 208	McCracken
	3	M., W., F., at 3	Ha. 200	McCracken
101—102	3	M., W., F., at 4	Ha. 208	McCracken, Brown
103—	2	Tu., Th., at 2	Ha. 208	McCracken
—104	2	Tu., Th., at 9	Ha. 208	McCracken
105—105	2	S., 10 to 12	Ha. 208	McCracken, Brown
111—112	3	M., W., F., at 8	Ha. 208	Brown
113—114	3	M., W., F., at 2	Ha. 101	McCracken
115—	2	Tu., Th., at 3	Ha. 208	Brown
—116	3	M., W., F., at 9	Ha. 200	Brown
119—120	2	S., 10 to 12	Ha. 208	Brown, McCracken

SCHOOL ADMINISTRATION—Continued

Course No.	Hours	Time	Room	Instructor
—122	2	To be arranged		
123—124	3	To be arranged		
127—	2	To be arranged		
132—	2	To be arranged		
133—134	3	M., Th., F., at 11	Ha. 208	Brown
201—202	2 to 5	To be arranged		Brown, McCracken

SHOPWORK

101—101	2	Tu., at 8; Tu., 1 to 4	S.	
		Tu., at 10; F., 1 to 4	S.	Denman
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11		Senn
		Tu., at 10; M., 1 to 4	S.	
		Th., at 1; Th., 8 to 11	S.	
		Th., at 3; M., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
103—103	2	Tu., at 8; Tu., 1 to 4	S.	Foust, Wright
		Tu., at 10; F., 1 to 4	S.	
		Tu., at 10; M., 1 to 4	S.	
		Tu., at 1; Tu., 8 to 11	S.	
		Tu., at 1; F., 8 to 11	S.	
		Tu., at 3; M., 8 to 11	S.	
		Th., at 2; Th., 8 to 11	S.	
		F., at 9; Th., 1 to 4	S.	
105—	2	M., at 9; Tu., 1 to 5	S.	Breckur
		Th., at 2; S., 8 to 10	S.	
—105	2	M., 1 to 4; Tu., 1 to 3	S.	Breckur
107—	2	M., 8 to 10; Tu., 8 to 11	S.	Case, Wright
		W., 1 to 3; S., 8 to 11	S.	Case
—107	2	W., 1 to 4; S., 8 to 10	S.	Case, Wright
109—	2	M., 1 to 3; Tu., 1 to 4	S.	Beem
		F., 8 to 10; S., 8 to 11	S.	Beem
—109	2	F., 8 to 10; S., 8 to 11	S.	Beem
111—	1	W., 8 to 11	S.	Beem
		F., 1 to 4	S.	Beem
—111	1	Tu., 9 to 12	S.	Beem
115—	2	M., 8 to 10; Tu., 8 to 11	S.	Foust, Wright
		Tu., 1 to 4; W., 1 to 3	S.	Foust, Wright
—115	2	W., 1 to 4; S., 8 to 10	S.	Foust, Wright
—118	2	To be arranged	S.	Foust, Wright
119—	3	M., Tu., 8 to 11	S.	Case, Wright
		W., Th., 8 to 11	S.	Case, Wright
		F., 1 to 4; S., 8 to 11	S.	Case, Wright
—119	3	W., Th., 8 to 11	S.	Case, Wright
		M., Tu., 1 to 4	S.	Case
121—	3	M., Tu., 1 to 4	S.	Knight, Case, Wright

SHOPWORK—Continued

Course No.	Hours	Time	Room	Instructor
		W., Th., 1 to 4	S.	Knight, Case, Wright
—121	3	M., Tu., 8 to 11	S.	Knight, Case, Wright
		W., Th., 1 to 4	S.	Knight, Case, Wright
		F., S., 8 to 11	S.	Knight, Case, Wright
123—	2	To be arranged	S.	Knight, Case, Wright
125—125	2	To be arranged	S.	Knight, Case, Wright
127—127	3	To be arranged	S.	Knight, Case
201—202	5 to 10	To be arranged	S.	Sanborn, Knight

For Short Courses Only

51—51	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.
52—52	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.

ZOOLOGY AND ENTOMOLOGY

ZOOLOGY

101—102	3	L., Tu., Th., at 8	B. Z. 67, 109	All Instructors
		Tu., Th., at 9	B. Z. 67, 109	
		Tu., Th., at 10	B. Z. 67, 109	
		Tu., Th., at 1	B. Z. 67, 109	
		Tu., Th., at 2	B. Z. 67, 109	
		Tu., Th., at 3	B. Z. 67, 109	
		Lab., M., 1 to 3	B. Z. 65, 69	
		W., 8 to 10	B. Z. 65, 69	
		W., 1 to 3	B. Z. 65, 69	
		Th., 8 to 10		
		Th., 1 to 3		
		F., 8 to 10	B. Z. 65, 69	
		F., 1 to 3	B. Z. 65, 69	
		Pre-Medics and Dentistry		
		M., W., at 10	B. Z. 67	
		M., 8 to 10	B. Z. 65, 69	
—101	3	M., W., at 2; M., 8 to 10	B. Z. 67, 65	Barrows
115—115	3	M., W., F., at 10	B. Z. 211	

ZOOLOGY AND ENTOMOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
121—122	3	L., Tu., at 1 Lab., Tu., 2 to 4; Th., 1 to 3	B. Z. 111	Kostir
123—	2	To be arranged	B. Z.	Kostir
—124	2	To be arranged	B. Z.	Osburn, Kostir
129—	2 to 5	M., Th., at 11	B. Z. 67	Barrows
—130	2 to 5	M., Th., at 11	B. Z. 67	Barrows
131—132	3	M., Th., F., at 11	B. Z. 109	Osburn
139—140	2	M., at 10; Tu., 1 to 4	B. Z.	Hine
141—142	3 to 5	To be arranged	B. Z.	
145—	3	To be arranged	B. Z.	Barrows
153—154	2 to 5	M., W., at 9	B. Z. 67	Barrows
—158	3	M., F., at 11; W., 1 to 4	B. Z. 111	Krecker
159—160	3 to 5	L., W., F., at 8 Lab., to be arranged	B. Z. 209	Krecker
201—202	1	To be arranged	B. Z.	Osburn
223—224	3 to 5	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	
247—248	5	To be arranged	B. Z.	Osburn

ENTOMOLOGY

107—108	3	L., M., W., at 8 M., W., at 1 Lab., Tu., 8 to 10 Tu., 1 to 3	B. Z. 109 B. Z. 67 B. Z. 65, 69 B. Z. 65, 69	Metcalf Metcalf Metcalf Metcalf
—112	3	Tu., Th., at 8 Lab., Th., 1 to 4 S., 8 to 11	B. Z. 211 B. Z.	Hine
113—114	4	M., W., at 10 Lab., M., W., F., 1 to 4	B. Z. B. Z. 107	Metcalf
137—138	3 to 5	M., W., at 10 Lab., M., W., F., 1 to 4	B. Z.	Metcalf
141—142	3 to 5	To be arranged	B. Z.	
147—	2	Tu., Th., at 10	B. Z. 211	Hine
—148	2	M., W., at 9	B. Z.	Osburn
149—150	3 to 5	M., F., at 11 Lab., F., 8 to 11	B. Z. 211	Metcalf
151—152		Tu., at 11 Lab., Tu., F., 1 to 4	B. Z. 211	Metcalf
155—156	3	M., W., F., at 9	B. Z. 211	Hine
—162	4	To be arranged	B. Z.	
201—202	1	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	

For Short Courses Only

51—52	4	M., W., Th., F., at 2	B. Z. 211	Hine
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The Ohio State University Bulletin is issued at least twenty times during the year; monthly in June, July, August, and September, and bi-weekly in October, November, December, January, February, March, April, and May.

17
The Ohio State University Bulletin

VOLUME XXIV

FEBRUARY 15, 1920

NUMBER 17

COLLEGE OF
EDUCATION

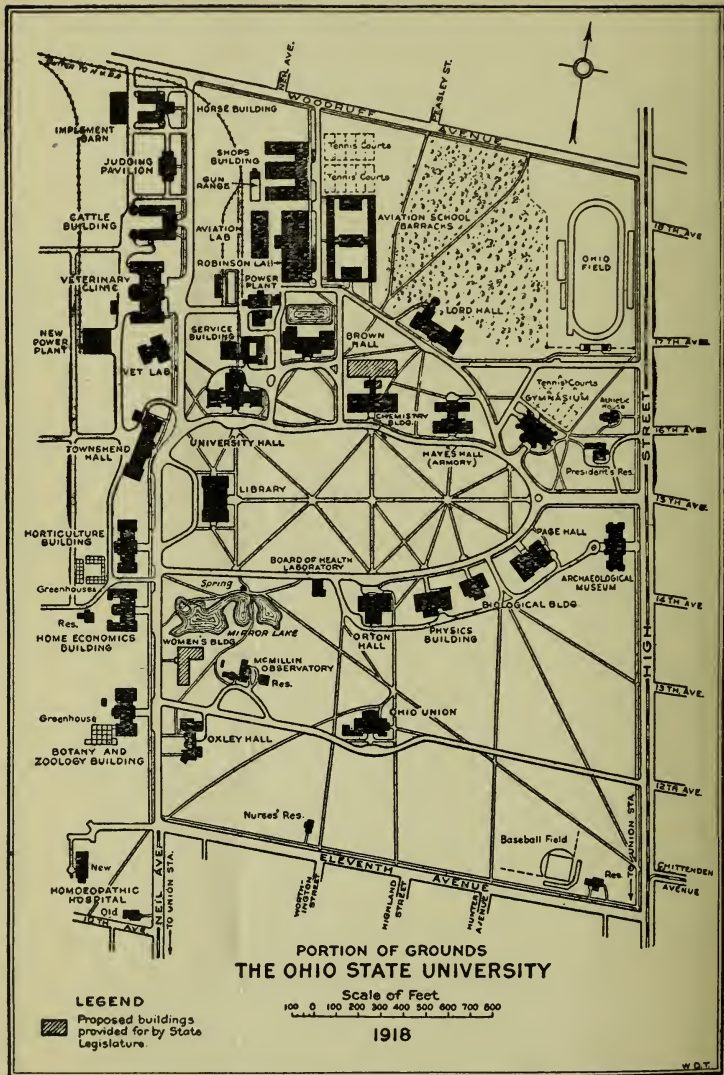
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— JUL 6 1920

1920-1921

PUBLISHED BY THE UNIVERSITY AT COLUMBUS

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UNIVERSITY CALENDAR

1920

- Summer Session, Monday, June 21 to Friday, August 13.
Entrance examinations, Tuesday to Saturday, 8 A. M., June 22 to 26.
Entrance examinations, Tuesday to Saturday, 8 A. M., September 7 to 11.
Registration Day—First Semester—Tuesday, September 14.
President's Annual Address, Wednesday, September 15, 11 A. M.
Latest date for registration of candidates for a degree at the Commencement in June, 1921, October 1.
Registration Day, Short Courses in Agriculture—First Term—Tuesday, October 19.
Mid-semester reports to the Deans concerning delinquent students, Wednesday, November 10.
Thanksgiving recess begins November 24, 1 P. M., and ends November 30, 8 A. M.
Christmas recess begins Friday, December 17, 6 P. M.

1921

- Christmas recess ends Tuesday, January 4, 8 A. M.
Registration Day, Short Courses in Agriculture—Second Term—Tuesday, January 4.
Final examinations, Wednesday, January 26, to Thursday, February 3.
Farmers' Week, Monday, January 31 to Friday, February 4.
First semester ends Thursday, February 3, 6 P. M.

SECOND SEMESTER

- Registration Day—Second Semester—Tuesday, February 8.
University Day, Tuesday, February 22.
Close of Second Term, Short Courses in Agriculture, Friday, March 18.
Easter recess, Thursday noon, March 24 to Tuesday, March 29, 8 A. M.
Mid-semester reports to the Deans, Wednesday, April 13.
Competitive Drill—Cadet Regiment—Saturday, May 28.
Memorial Day, Monday, May 30.
Final examinations, Wednesday, June 1, to Thursday, June 9.
Commencement, Tuesday, June 14.
Summer Session, Monday, June 20 to Friday, August 12.
Entrance examinations, Tuesday, June 21, to Saturday, June 25, 8 A. M.

THE FRANKLIN CO. CHL.

THE PRACTICE OF THE

JANUARY.							FEBRUARY.							MARCH.							APRIL.						
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30	31

SEPTEMBER.							OCTOBER.							NOVEMBER.							DECEMBER.						
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THE FRANKLIN CO. CHS.

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COLLEGE OF EDUCATION

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Residence: 104 Fifteenth Ave.—11300	
Secretary.....	CHARLES C. McCracken
Office: 211 University Hall—99375	
Residence: 172 E. Lane Ave.—11971	

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the city of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called colleges. The Ohio State University comprises a graduate school and eleven colleges, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Education
College of Agriculture	College of Engineering
College of Arts, Philosophy and Science	College of Homoeopathic Medicine
College of Commerce and Journalism	College of Law
College of Dentistry	College of Medicine
	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a Director and governing committee for the administration of the regular University courses offered in the summer.

This bulletin is devoted exclusively to the work of the College of Education for the academic year, 1920-1921.

(NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing the Secretary of the Entrance Board, Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.)

COLLEGE OF EDUCATION

This college was established by the University for the professional training of teachers, as provided in the school laws of this State. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the college is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this college leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Industrial Education, Home Economics, Agricultural Education, Agricultural Chemistry, American History, Anatomy, Bacteriology, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

PHYSICAL EDUCATION

Provision has been made by the College of Education to meet the demand in the public schools for directors and teachers of physical education, and for athletic coaching. Regular students in the college preparing for high school teaching may include

in their curriculum Physical Education as a "minor subject" and receive credit for it towards their degree. The minor consists of twelve semester hours in addition to the courses required of first and second year students. In each case the approval of the Head of the Department of Physical Education and of the Dean of the College must be obtained.

For further details see the courses as announced on page 86.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Secretary of the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two summer sessions are considered the equivalent of one semester and four summer sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this College. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school teachers' certificate, without examination. This certificate, obtainable from the State Superintendent of Public Instruction on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Industrial Education or in Art are also entitled, without further examination, to a state provisional special certificate valid for four

years, in the appropriate one of the above lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

PROFESSIONAL SUBJECTS

Pursuant to the present School Code of Ohio the State Superintendent of Public Instruction has designated the subjects which are accepted and treated as professional subjects in the training of teachers and which must be included within the minimum of thirty semester hours required of all applicants for state high school provisional or life certificates.

The subjects are, General Psychology, Educational Psychology, History of Education, Principles of Education (or Science of Education), School Administration, Methods of Teaching, either general or special, and Supervised Practice Teaching.

Work in each of the foregoing subjects is absolutely required of all applicants for such certificates. In addition to the above, under certain conditions, Experimental Psychology, Sociology and Philosophy may be counted, if needed, to make up the necessary thirty hours.

The various curricula in the College of Education include all of the subjects necessary to meet the foregoing provisions.

GENERAL INFORMATION

RESERVE OFFICERS' TRAINING CORPS

Under the law of Congress establishing the land grant colleges, it is required that instruction in Military Science and Tactics be included in the curricula. This instruction is given under the Defense Act of June 3, 1916, establishing in the University the Reserve Officers' Training Corps. Under normal conditions, six commissioned officers and eleven non-commissioned officers of the regular army are detailed by the War Department to take charge of this department. The Board of Trustees have directed that all male students, special and regular, except those registered in the Colleges of Law, Medicine, Homoeopathic Medicine, and Dentistry, shall complete two years of military service unless especially excused by the Military and Gymnasium Board.

Foreign students are not exempt from military training, nor is self-support an adequate reason for excusing a student from the requirement in Military Science.

The Reserve Officers' Training Corps is organized as a brigade consisting of two regiments of infantry, each composed of three battalions of four companies each, and one regiment of field artillery, composed of two battalions of three batteries each, a band of sixty pieces, and a trumpet corps. There are two companies of men from the students in the Three-Year Course in Agriculture. The total number of men under arms averages about three thousand.

The course of instruction is both practical and theoretical, and divided into basic and advanced courses in both infantry and field artillery. One-half of the time is devoted to theoretical work in the class-room, and one-half of the time to practical work in the field. The basic courses are required of all freshmen and sophomores. The advanced courses are elective for juniors and seniors. Students completing the advanced course when recommended by the Commandant and the President of the University are granted a commission as second lieutenant in the Officers' Reserve Corps by appointment from the Presi-

dent of the United States. No student is eligible for the advanced course until he has satisfactorily completed the basic course or its equivalent.

Uniforms and equipment are furnished by the War Department. Students who are taking advanced courses in Military Science also receive forty cents per day as commutation of rations in addition to their uniforms.

The appointment of cadet officers is made usually from those who have served in the Military Department at least one year and as a reward for excellence in their work. No compensation is paid to officers who are completing their first two years of service in the Military Department, the only exception being those who have had the equivalent of the required two years in service elsewhere. The compensation awarded at the end of each year of satisfactory service is thirty dollars for lieutenants, forty dollars for captains, and proportional sums for officers of higher rank.

Service in the band is credited as military service, the positions being assigned after competitive try-out. Members of the band who have completed two years of service in the Military Department or its equivalent are paid at the rate of twenty dollars per year and receive instruction during the four winter months from a competent bandmaster.

THE APPOINTMENT COMMITTEE

In order to serve the schools of the state, the Faculty has provided a committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the committee on a blank provided for that purpose. Blanks may be obtained from the Chairman, Mr. J. L. Clifton, Room 211, University Hall. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the Committee.

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of thirty-five dollars is offered for the best essay on the principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the Head of the Department of American History.

FEES AND EXPENSES

GENERAL CHARGES

All University fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until all fees have been paid. No student will have any privileges in the classes or laboratories until all fees and deposits are paid.

Since all fees are due and payable as a part of the student's registration, no person should come to the University for registration without money sufficient to cover all of his fees and deposits.

Matriculation Fee. Every student upon his first admission to the University is required to pay a matriculation fee of \$10.00. This fee is paid but once, and is in addition to other University fees and entitles the student to the privileges of membership in the University. (Effective June 1, 1920.)

Non-resident Fee. Every undergraduate student who is not a legal resident of the State of Ohio is required to pay a non-resident fee of \$25.00 each semester of his residence in the University in addition to other University fees. The burden of registering under proper residence is placed upon the student. If there is any possible question of his right to legal residence the matter should be brought to the attention of the Registrar and passed upon, previous to registration or the payment of fees. Any student who registers improperly under this rule shall be required to pay not only the non-resident fee but shall be assessed a penalty of \$10.00. (Effective June 1, 1920.)

No person shall be considered eligible to register in the University as a resident of the State of Ohio unless he has resided in the state twelve months next preceding the date of his proposed enrollment; and no person shall be considered to have gained a residence in this state for the purpose of registering in the University while he is a student in the University.

The residence of minors shall follow that of the legal guardian.

The residence of wives shall follow that of husbands.

Aliens who have taken out first citizenship papers and who have been residents of Ohio for twelve months next preceding the date of their enrollment in the University, shall be regarded as eligible for registration as residents of Ohio.

Incidental Fee. The fee for all students is fifteen dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit ranging from two to fifteen dollars for each course requiring such supplies is made at the Bursar's office before the student can enter the laboratory. All laboratory supplies are sold at the General Store Room, Chemistry Hall, to students at cost to the University, and charged against the deposit. Any unused part of the deposit is refunded at the end of the semester.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving

one of the ordinary degrees from the University, and this fee must be paid on or before the last Friday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Textbooks. Students should not purchase textbooks until they are advised by the instructors of their respective classes.

EXPENSES PER YEAR

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost of the freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Matriculation fee	\$ 10 00
Incidental fee	30 00
Ohio Union	2 00
Gymnasium locker	4 00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	30 00
Books	30 00
Board—36 weeks at \$8.00 per week.....	288 00
Room rent, at \$15.00 per month.....	135 00
General expenses	100 00
	<hr/>
	\$629 00

The item of general expenses is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

In order to meet all the necessary expenses of registration, books, and other expenditures incident to securing a room and board, a student should come prepared to expend from seventy-five to one hundred dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.

WOMEN STUDENTS

As far as possible women students should make arrangements for room and board in advance. An effort will be made to secure suitable accommodations in private residences for such as cannot be accommodated in Oxley Hall. Prospective women students should address Miss Elisabeth Conrad, Dean of Women, the Ohio State University, Columbus, Ohio.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$500 for the academic year and in addition all fees are remitted, except the matriculation fee and a diploma fee for those students who receive degrees. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$250 with exemption from all fixed fees except the matriculation fee. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees except the matriculation fee. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applica-

tions not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

THE RHODES SCHOLARSHIPS

Men who have completed their sophomore year at the Ohio State University are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of three hundred pounds each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curriculum activities. Further information may be obtained from any member of the Rhodes Scholarship Committee of Selection for Ohio: Chairman, President W. O. Thompson, Ohio State University, Columbus, Ohio; Professor B. E. Schmitt, Western Reserve University, Cleveland, Ohio; Cary R. Alburn, Esq., Attorney, Garfield Bank Building, Cleveland, Ohio; Secretary, Professor Leigh Alexander, Oberlin College, Oberlin, Ohio.

ADMISSION

The College is open on equal terms to both sexes.

Applicants for admission should be at least sixteen years of age.

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, an applicant for admission must be a graduate of a high school of the first grade or obtain credit by examination for fifteen entrance units.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language; and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded, as he will be required to carry courses in the University to make up the deficiency and he may not be able to obtain a degree in the usual four years.

SPECIAL STUDENTS OF MATURE YEARS

A person of mature years who is unable to meet the entrance requirements in all respects, under certain circumstances may be permitted to matriculate for specified courses for which he can demonstrate adequate qualifications. An applicant under 21 years of age will not be considered. Inquiry concerning such admission should be addressed to the Entrance Board, and, to receive consideration must reach the Board not less than ten days in advance of the opening of the semester.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, manual training, home economics, and agriculture.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

GENERAL COURSE

The work of the first two years must include:

(a) English

- | | |
|--|---------------|
| (a) English 101 and 104 | (2-2) 4 hours |
| English 133 and either English 141, 142,
145 or 146 | (3-3) 6 hours |
| English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency. | |

(b) Languages

- (b) One of the following languages which must be pursued through both the first and second years: (4-4-4-4) 16 hours
Greek, Latin, French, German, Spanish.
The second year will not be required of students who offer six entrance units in foreign language.
Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the

work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) Mathematics

- (c) Mathematics 121-122: (3-3) 6 hours, or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study.

Every student must secure credit either in high school, or in the college for algebra through quadratics, and for plane geometry.

(d) Science

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104

Chemistry 105-106 or 109-110

Geology (Geography) 121-122

Astronomy 101-102

Biological:

Anatomy 101-102

Physiology 101-102

Zoology 101-102

Botany 101-102

Every student is required to take one of the above sciences in college, and every student is also required to have either entrance or college credit for both a biological and a non-biological science. Students who enter without one unit in physics or in chemistry must take one of these subjects in college. Students who enter without one unit in zoology or in botany must take a biological science in college. Students who have entrance credit for one unit in physics or chemis-

try and one unit in zoology or in botany must take a science in college.

(e) History

(e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one unit of history for entrance the requirement is twelve semester hours.

(f) Psychology (3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education, not less than 6 hours

Elements of Sociology, not less than 6 hours

Educational Psychology, not less than 4 hours

The Principles and Practice of Teaching, 6 or 9 hours

School Administration, 3 or 6 hours

A course in the teaching of the major subject, not less than 2 hours.

(2) Major Courses

The work which the student is preparing to teach (selected in the first or second year)—hours enough, usually thirty semester hours, to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps, (as defined in General Orders No. 49 as may be amended in the future by the War Department) the total number of hours required in the General Course for the degree of Bachelor of Science in Education is 112 (instead of 120) semester hours, in addition to the work in military training and physical education. For the other curricula in the College of Education a like reduction of eight hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

CURRICULA

GENERAL COURSE

FIRST YEAR

First Semester

English	(101)	2
Group (b)		4
Group (c) or elective		3
Group (d)		4
Group (e)		3
*Survey of Education		1
Introductory		
Military Drill		1
Physical Education		1

Second Semester

English	(104)	2
Group (b)		4
Group (c) or elective		3
Group (d)		4
Group (e)		4
Military Drill		1
Physical Education		1

SECOND YEAR

English	(141 or 145)	3	English	(183)	3
or			or		
English	(183)	3	English	(142 or 146)	3
Psychology	(101)	3	Psychology	(102)	3
Group (b)		4	Group (b)		4
Major Work		5	Major Work		5
Military Drill		1	Military Drill		1
Physical Education (women)		1	Physical Education (women)		1

THIRD YEAR

Sociology	(101)	3	Sociology	(102)	3
History of Education	(101)	3	History of Education	(102)	3
Educational Psychology	(107)	2	Educational Psychology	(108)	2
Major Work		5	†Major Work		5
Correlated Work		2	Correlated Work		2

FOURTH YEAR

Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
or			School Administration		
Principles and Practice of Education	(104)	3	or	(112 or 114)	3
School Administration	(101)	3	Principles of Education	(107)	3
Major Work		5	Major Work		5
Elective		4	Elective		4

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

†NOTE: Principles of Education (101) 3 hours, or School Administration (101) 3 hours may be taken in the second semester and 3 hours of major work postponed until the fourth year.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, exclusive of the requirements in military drill and physical education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units or less than three, of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the biological science required in the curriculum.

Students who enter without one unit in history, must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 3	Botany	(102) 3
European History	(101) 3	European History	(102) 3
*Survey of Education	1	Military Drill	1
Introductory		Physical Education	1
Military Drill	1		
Physical Education	1		

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Drill	1	Military Drill	1

For Students Majoring in Drawing

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(148) 2
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Art	(147) 2	Elective	4
Elective	1		

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

For Students Majoring in Design

THIRD YEAR

First Semester		Second Semester	
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(134) 2
Art	(142) 3	Art	(143) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	3

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(147) 2	Art	(144) 3
Art	(117) 3	Art	(145) 3
School Administration	(101) 3	Elective	3
Elective	2		

For Students Majoring in History and Appreciation of Art

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(155) 2
Art	(154) 2	Art	(156) 2
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Elective	2	Elective	4

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
Art	(157) 3	Art	(158) 5
Art	(117) 3	Elective	4
School Administration	(101) 3		

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units and less than three of a foreign language will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four, of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics must take this subject in addition to the science requirements of the course.

Students who enter without one unit in history, must take at least six semester hours, of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester		Second Semester	
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
English	(101) 2	English	(104) 2
Zoology	(101) 3	Zoology	(102) 3
French or German	4	French or German	4
Home Economics	(111) 2	Home Economics	(112) 2
*Survey of Education	1	Art	(119) 1
Introductory		Physical Education	1
Physical Education	1		

SECOND YEAR

Chemistry	(127) 4	Agricultural Chemistry	(123) 4
Home Economics	(101) 5	Home Economics	(102) 5
Physiology	(101) 3	Physiology	(102) 3
French or German	4	French or German	4
Physical Education	1	Physical Education	1

THIRD YEAR

Psychology	(101) 3	Psychology	(102) 3
Economics	(101) 3	Economics	(102) 3
Bacteriology	(107) 4	Home Economics	(104) 3
Art	(131) 2	Art	(141) 2
History of Education	(101) 3	History of Education	(102) 3
		Elective	3

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

FOURTH YEAR

Sociology	(101)	3	Sociology	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Home Economics	(118)	3	School Administration		
School Administration	(101)	3	or	(112 or 114)	3
Home Economics	(127)	3	Principles of Education	(107)	3
			Home Economics	(119)	4
			Elective		3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry, must take one of these subjects in addition to the requirement of the course. Students who enter without one unit in zoology or in botany, must take a biological science. Students who enter without one unit in history, must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language,

but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Art	(131) 2	Art	(141) 2
American History	(101) 3	American History	(102) 3
or		or	
Foreign Language	4	Foreign Language	4
Engineering Drawing	(139) 4	Engineering Drawing	(140) 3
*Educational Survey	1	Industrial Education	(125) 2

SECOND YEAR

English	(133) (141) or (145) 3	English	(142) (146) or (133) 3
Chemistry	(105) or (109) 4	Chemistry	(106) or (110) 4
Psychology	(101) 3	Psychology	(102) 3
Industrial Education	(127) 3	Industrial Education	(128) 3
Shopwork	(105) 2	Shopwork	(115) 2
Elective	2	Elective	2

THIRD YEAR

Physics	(103) or (105) 4	Physics	(104) or (106) 4
Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Industrial Education	(117) 2	Industrial Education	(118) 2
Industrial Education	(133) 2	Industrial Education	(134) 2
Industrial Education	(129) 3	Elective	3

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice of Education	(101) 3	Principles and Practice of Education	(104) 3
School Administration	(101) 3	Industrial Education	(112) 3
Industrial Education	(111) 3	Industrial Education	(132) 3
Shopwork	(119) 3	Elective	3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree, Bachelor of Science in Education.

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credit for one hundred and forty hours, exclusive of the requirement in military drill and physical education, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.

Students registered for this combined Arts-Education curriculum must ordinarily expect to use at least one summer session in addition to the four years to complete the work.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN AND LYMAN, AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. Household Chemistry. Four credit hours. Second semester. Home Economics. Prerequisite, Chemistry 106 or 110, and 127. Mr. Lyman.

Lectures on household chemistry. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods and other materials of household interest.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT AND HOCKETT, ASSISTANT PROFESSOR BOUCHER, MR. WOOD, MR. WITTKE, MR. ROSEBOOM

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), courses 101-102 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher, 101-102, 103-104, 119, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 101-102 and Economics 101-102 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1920). Three credit hours. The year. Mr. Hockett, Mr. Wood, Mr. Wittke, Mr. Roseboom.

American History 101 is given also during the second semester, and American History 102 in the first semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases

receive chief attention. The first semester covers the period 1763-1829. The second semester covers the period 1829-1920. Textbook, discussion, and collateral readings. This course must precede all other courses in American history, except 118 and 125-126.

***107. Formation of the Constitution.** Two credit hours. First semester. Prerequisite, American History 101-102. Political Science 133 or 101 will be found a valuable adjunct to this course. Mr. Hockett.

Beginning with a brief study of the constitutional ideas of Americans in the revolutionary period, the course traces the formation of the federal constitution by the convention of 1787, and discusses the constitutional problems involved in the establishment of the government. Lectures, discussion and reports.

***108. Constitutional History of the United States.** Two credit hours. Second semester. Prerequisite, American History 101-102. American History 107 affords a good foundation, and Political Science 133 or 101 a valuable adjunct. Mr. Hockett.

The chief controversies over the interpretation of the constitution and the effects of these controversies upon the evolution of the American constitutional system. Such questions are dealt with as the acquisition of territory, internal improvements, the tariff, slavery, and the relations of the nation and the states. Lectures, discussion and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102. Mr. Boucher.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1920). Two credit hours. Second semester. Prerequisite, American History 101-102. American History 109 affords a good foundation. Mr. Boucher.

*Not given in 1920-1921.

The development of national parties in the period from 1852 to the re-election of Woodrow Wilson and after, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion and reports.

103-104. **The American Colonies, 1600-1783.** Three credit hours. The year. Prerequisite, American History 101-102. Mr. Wood.

The general history of the English colonies in America, with especial emphasis on European conditions affecting colonization, the development of government in the several colonies, and relations with the mother country, including the struggle for independence. Lectures, discussion and reports.

118. **History of Canada.** Two credit hours. Second semester. Not open to freshmen. Mr. Wittke.

Special attention is given to the period since the Dominion Act of 1867, to the relations of Canada with the mother country and with the United States, and to a comparison of Canadian with American development and institutions. Lectures, readings, and reports.

NOTE: For course, War Issues, see European History 131-132: **The World War: its Causes, Issues and Results.** Three credit hours. The year. Not open to first year students.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American history.

119. **Introduction to Historical Research.** Two credit hours. First semester. Prerequisite, four semesters in American history. Mr. Hockett.

Drill in finding historical material by the use of standard guides, manuals, and catalogs, followed by practice in criticizing material, and exercises in historical composition. Each student then applies what has been learned by preparing an essay. Attention is given throughout to approved forms for note-taking, citation of authorities, etc. Designed especially for students who

expect to teach American history in secondary schools, or to pursue graduate work in this field.

111. The Slavery Struggle in the United States. Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Boucher.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

112. Reconstruction and its Results, 1863-1920. Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Boucher.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

***113. American Diplomacy to the Close of the Civil War.** Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Boucher.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussion and reports.

***114. Problems of American Diplomacy since the Civil War.** Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History 101-102, and at least two other semesters in the Social Science group. Mr. Knight.

*Not given in 1920-1921.

Problems in the diplomacy of the United States, resulting from the Civil War, the development of the Monroe Doctrine, the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussion and reports.

115. The History of the Westward Movement to 1812. Three credit hours. First semester. Mr. Hockett.

The westward advance of settlement from the Atlantic coast, across the Alleghenies, into the Ohio Valley, dealing with the causes of the movement, the rise of new communities, and the influence of western development upon national history and institutions. It is essentially a study of the development of American society. Lectures, discussion and assigned readings.

116. The History of the Westward Movement since 1812. Three credit hours. Second semester. Mr. Hockett.

The progress of settlement in the Mississippi Valley and westward to the Pacific, studying the territorial acquisitions, the fur trade of the far West, the discoveries of gold and silver, the extension of railways to the Pacific, the Indian wars, the significance of the disappearance of the frontier, the irrigation and conservation movements.

121. The Teaching of American History. Two credit hours. First semester. Given biennially. Mr. Knight.

Lectures, reading and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment, examination of textbooks; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

123-124. Recent History of the United States, 1870-1920. Three credit hours. The year. **Prerequisites,** American History

101-102, and at least two other semesters in the Social Science group. Economics 101-102 will be found a valuable adjunct to this course. Mr. Knight.

An intensive study of the political, constitutional, industrial and social life of the nation and the state during the past generation; it includes a consideration of new applications of the constitution, industrial development, territorial expansion, the entry of the United States into the world politics, third party movements, and the rise of the new democracy. Lectures and individual investigations.

130. American Historical Writers. Two credit hours. Second semester. Prerequisite, four semesters in American history. Mr. Hockett.

A study of the methods and works of Sparks, Parkman, Bancroft, McMaster, Rhodes, and other leading American historians.

133. The Influence of Racial Groups on the History of the United States. Two credit hours. First semester. Mr. Wittke.

The influence of different racial groups upon American history from the colonial to the modern period, with special emphasis upon the contributions of the immigrant to the development of American institutions and the effect of immigration upon our political and social history.

FOR GRADUATES

203-204. The United States and Latin-America, 1800-1905.

205-206. Seminary in American History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ANATOMY

Office, 105 Biological Hall

PROFESSOR LANDACRE, ASSISTANT PROFESSOR BUCK, MR. KNOUFF,
MR. BAKER

Courses in anatomy are designed for three classes of students:

(a) Students desiring a general training in the anatomy of the vertebrates should take Comparative Anatomy 101-102 as a preliminary course. This may be followed by General Vertebrate Embryology 103-104, or Anatomy and Embryology of the Frog 105-106 or any of the courses listed for advanced

undergraduates. Students interested in the nervous system should take 107 or 108 as a preliminary course which may be followed by 109-110 for more extended study from a comparative standpoint.

(b) Students desiring to major in anatomy or to take a minor in anatomy should begin work with 101-102, or 103-104 and follow these with 105-106, or 107-108, or 109-110 and 119. The strictly graduate courses are listed in the Graduate School Bulletin.

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to eight laboratory hours each week. Not open to freshmen. Mr. Baker.

Fishes, amphibians and reptiles.

102. Comparative Anatomy of the Vertebrates. Three or five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101, or an equivalent. Mr. Baker.

Birds and mammals.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Not open to freshmen. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight laboratory hours each week. Not open to freshmen. Mr. Landacre.

The histology and early development of the frog.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Not open to freshmen. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Not open to freshmen. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

116. *The Digestive System*. Three credit hours. Second semester. One lecture and four laboratory hours each week. Elective for third or fourth year students. Prerequisite, one year's work in biological science. Mr. Landacre, Mr. Buck.

A study of the gross and microscopic structure of the digestive system and associated organs in one of the higher mammals and in man.

118. *Elementary Comparative Anatomy of Vertebrates*. Three to five credit hours. Second semester. One lecture and five to eight laboratory hours each week. Required of students in the Arts-Medicine and Science-Medicine courses. Prerequisites, Zoology 101, Physiology 101 or an equivalent. Mr. Landacre, Mr. Knouff, Mr. Baker.

A preliminary study of the comparative anatomy and embryology of the vertebrates accompanied by careful dissections of the shark, frog and cat. This course meets the pre-medical requirements in Anatomy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. *Comparative Neurology*. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates.

110. *Comparative Neurology*. Three to five credit hours. Second semester. One lecture or conference and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

FOR GRADUATES

201-202. *Vertebrate Embryology*.

203-204. *Research Work*.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ART

Office, 203 Hayes Hall

PROFESSOR KELLEY, ASSISTANT PROFESSOR ROBINSON, MR.
NORRIS, MR. WEBBER, MISS KNAUBER, MRS. BRAUN

131-132. Elementary Drawing. Two credit hours. The year.
All instructors.

This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also during the second semester.

Art 132 is given also during the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133. Mr. Kelley.

136. Water Color Painting. Two credit hours. Either semester. Prerequisite, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. Advanced Water Color. Three credit hours. Second semester. Prerequisite, Art 136.

138. Oil Painting. Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. Advanced Oil Painting. Three credit hours. Second semester. Prerequisite, Art 138.

Painting from the costume model.

141. Elementary Design. Two credit hours. Either semester. Prerequisite, Art 131 and 119. All instructors.

The principles of the theory and practice of design.

142. Advanced Design. Three credit hours. Either semester. Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. **Specialized Design.** Three credit hours. Second semester. Prerequisite, Art 142 or Art 121.

Field to be chosen by the student. Recommended for students desiring to study interior decoration.

144. **Commercial Design.** Three credit hours. Second semester. Prerequisite, Art 142. Mr. Norris.

This course is aimed to give a grasp of commercial design problems.

145. **Thesis Work Design.** Three credit hours. Second semester. Prerequisite, Art 143.

This course is required of students graduating in design.

147. **Illustrative Drawing.** Two credit hours. First semester. Two two-hour periods. Prerequisite, Art 132. Mr. Norris.

Drawing for reproduction in pen and ink with special reference to architectural and scientific drawing.

148. **Illustrative Drawing.** Two credit hours. Second semester. Two two-hour periods. Prerequisite, Art 132. Mr. Norris.

Various methods of drawing for reproduction in relation to transparent and opaque wash but not pen and ink. This course deals with the standard methods of technique for illustrations which are to be reproduced.

151. **History of Classic Art.** Three credit hours. Either semester. Not open to freshmen. Mr. Kelley.

The study of the art of Greece and Rome, with some consideration of Egypt, Assyria and Persia. Illustrated lectures, reading and reports.

152. **History of Medieval Art.** Three credit hours. Second semester. Prerequisite, Art 151. Not open to freshmen. Mr. Webber.

From the origins of Christian art in Rome to the end of the Gothic period. Illustrated lectures, reading and reports.

153. **History of Renaissance and Modern Art.** Three credit hours. First semester. Prerequisite, Art 151. Not open to freshmen. Mr. Webber.

From the beginning of the Renaissance in Italy to the beginnings of modern art in the eighteenth century. Illustrative lectures, reading and reports.

160. Modern Painting and Sculpture. Three credit hours. First semester. Three lectures a week and occasional reports. Mr. Kelley.

This course will deal with the art of the last two centuries, laying particular stress upon the development in France, England and the United States.

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments and observations.

119. Appreciation of Art. One credit hour. Either semester. Mr. Kelley.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141. Miss Knauber.

Art in dress; the direct application of design principles and color harmony to dress.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***154. Greek Sculpture.** Two credit hours. First semester. Prerequisite, Art 151. Mr. Kelley.

Lectures, reading and short thesis.

155. The Italian Schools of Painting. Two credit hours. Second semester. Prerequisites Art 151, 152, 153. Mr. Webber.

Lectures, reading and short thesis.

A study of the history and methods of Italian painting, with special reference to the formative influences in the painting of Italy and to the influence of Italy upon other European painting.

***156. The Netherlandish Schools of Painting.** Two credit hours. Second semester. Prerequisites, Art 151, 152, 153. Miss Robinson.

Lectures, reading and short thesis.

*Not given in 1920-1921.

*157. Art of China and Japan. Three credit hours. First semester. Prerequisite, junior standing and at least two other courses in this department. Mr. Kelley.

Lectures, reading and reports.

158. Thesis in Art History. Five credit hours. Second semester. Prerequisite, fifteen hours of art history. Mr. Kelley. This course is required of students graduating in art history.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. General Astronomy. Three credit hours. The year. Mr. Lord, Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. Astronomy, Geodesy and Least Squares. Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. Advanced Astronomy. Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSORS MORREY AND STARIN, MRS. MASTERS, MR. OCKERBLAD, MR. WATSON, AND DEPARTMENT ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in bacteriology are open to advanced undergraduates and graduate students only, not to freshmen or sophomores. The instructor in charge must be consulted before electing.

107. General Bacteriology. Four or five credit hours. First semester. Mr. Morrey, Mrs. Masters, and department assistants.

*Not given in 1920-1921.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the methods and devices used in these processes and of the organisms concerned. The modern water filtration and sewage disposal plants of the city of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

***116. Bacteriological Chemistry.** Two to five credit hours. Second semester. Prerequisite, Bacteriology 107.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in

*Not given in 1920-1921.

the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis

119-120. **Pathogenic Protozoa.** Two to five credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmoses, and spirochaetoses.

125-126. **Special Problems in Bacteriology.** Three to five credit hours. The year. Conferences, library and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

FOR GRADUATES

201-202. **Research in Pathogenic Bacteriology.**

203-204. **Research in Agricultural Bacteriology.**

BIBLIOGRAPHY

Office, The Library

MISS JONES

101-102. **The Library and the School.** One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS TRANSEAU AND SCHAFFNER, ASSISTANT PROFESSORS GRIGGS, STOVER, AND SAMPSON, MISS DETMERS, MR. WALLER, AND DEPARTMENT ASSISTANTS

101-102. **General Botany.** Three credit hours. The year. Two recitations and two laboratory hours. Mr. Sampson, Mr. Griggs, Mr. Stover, Miss Detmers, Mr. Waller.

A study of structure, growth, nutritive processes and water relations of the vegetative body of plants, and the relation of plants to their environments, the first semester. A study of the reproduction, heredity and evolution of plants, the nutrition and reproduction of bacteria and fungi in relation to plant diseases and sanitation; a brief survey of the great plant groups and the classification of some of the common plants of Ohio, during the second semester.

***107. Plant Histology.** Three credit hours. First semester. One lecture and two laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

An introduction to the technique of microscopic preparations, and the structure and development of the tissue systems of vascular plants.

***108. Ecological Anatomy.** Three credit hours. Second semester. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102. Miss Detmers.

A study of plant structures in relation to environmental factors.

119-120. Local Flora. Three credit hours. The year. Six laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

Field and laboratory study of the local flora. Practice in the identification of plants belonging to all of the great groups. Either course may be elected separately.

123. Morphology of Lower Plants. Four credit hours. First semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of algae, fungi, and bryophytes.

124. Morphology of Vascular Plants. Four credit hours. Second semester. Two lectures, four laboratory hours each week. Prerequisite, Botany 101-102. Mr. Griggs.

A study of the evolution and life histories of the more important groups of ferns and seed plants.

*Not given in 1920-1921.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisite, Botany 101-102 and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory and field work, with practice teaching under supervision.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

117-118. Plant Ecology. Three credit hours. The year. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Transeau.

The ecological relations of the forests, prairies, and deserts of North America. Field work on the local plant associations.

127-128. Plant Pathology. Four credit hours. The year. Two lectures and four laboratory hours each week. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Stover.

The course includes a study of the nature, symptoms, classification and course of plant diseases, their relations to environmental conditions; the diseases of particular crop plants and the methods of control; the classification and life histories of parasitic plants.

In the laboratory attention is given to the preparation of culture media, the isolation and culture of plant pathogens, the inoculation of plants followed by a study of the progress of the disease, and the preparation and use of preventive materials. A number of plant diseases are studied both in the laboratory and in the field.

129-130. Principles of Taxonomy. Three to five credit hours. The year. Prerequisite, Botany 101-102 or equivalent, and one additional year of some biological subject. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phy-

letic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

133-134. Minor Investigations. Three to five credit hours. The year. Prerequisite, Botany 101-102 and one additional year of some biological subject. Mr. Transeau, Mr. Schaffner, Mr. Griggs, Mr. Stover, Mr. Sampson, Miss Detmers, Mr. Waller.

*135-136. Evolution of Plants. One credit hour. The year. Prerequisite, Botany 101-102, and one additional year of some biological subject. Mr. Schaffner.

The evolution of plants with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

155. Economic Botany. Three credit hours. First semester. Two lectures and two laboratory hours each week. Elective. Prerequisite, Botany 101-102 and one additional year of botanical work. Mr. Waller.

Important economic plants of the world studied with reference to their geographic distribution, commercial importance and uses. A summary of the centers of crop production in relation to natural centers of vegetation, environmental, economic and other conditions.

FOR GRADUATES

201-202. Research in Systematic Botany.

203-204. Research in Morphology and Cytology.

205-206. Research in Physiology and Ecology.

207-208. Research in Mycology and Plant Pathology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1920-1921.

CHEMISTRY

Office, 100 Chemistry Hall

PROFESSORS McPHERSON, HENDERSON, FOULK, WILLIAM L. EVANS,
AND WITHROW, ASSISTANT PROFESSORS BOORD, DAY, HOL-
LINGSWORTH, AND MACK, MR. VILBRANDT, AND
DEPARTMENT ASSISTANTS

105. Elementary Chemistry. Four credit hours. First semester. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the non-metals, arranged for students who have not presented chemistry as an entrance requirement. Students taking this course will follow with Chemistry 106, second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 105. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the metals. The laboratory work accompanying is a general introductory course in qualitative analysis.

109. General Chemistry. Four credit hours. First semester. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of the non-metals. It is more advanced than Chemistry 105 and is arranged for students who have had an acceptable course in elementary chemistry in a secondary school. Students taking this course will follow with Chemistry 110, second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Second semester. Prerequisite, Chemistry 109. Mr. Evans, Mr. Day, and department assistants.

A general course on the chemistry of non-metals. It is more advanced than Chemistry 106. The laboratory work is a general course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. Prerequisite, Chemistry 106 or 110. Mr. Henderson.

A course of fundamental topics in the field of advanced general chemistry.

119-120. Quantitative Analysis. Four credit hours. The year. One lecture, nine laboratory hours each week. Labora-

tory open forenoons and afternoons. Prerequisite, Chemistry 106 or 110 or equivalent. Mr. Foulk, Mr. Hollingsworth, Mr. Hoover.

Elementary principles of gravimetric and volumetric analysis, with typical analytical methods. This course must be accompanied by Chemistry 124, except by special permission of the instructor. It is also desirable that it be accompanied by Chemistry 113-114.

124. Chemical Problems. One credit hour. Second semester. Mr. Foulk, Mr. Hoover.

Extended practice in the solution of problems pertaining to gravimetric and volumetric analysis. This course is arranged to accompany Chemistry 119-120.

127. Organic Chemistry. Four credit hours. First semester. Three lectures, one quiz each week. Prerequisite, an acceptable course in general chemistry. Mr. McPherson.

This is a general introductory course in organic chemistry.

151-152. Organic Chemistry. Two credit hours. The year. Prerequisite, Chemistry 109-110, 113-114 and 119-120, except by special permission of the instructor. Mr. McPherson.

Lectures in organic chemistry.

153-154. Organic Chemistry. Two or three credit hours. The year. Six or nine laboratory hours each week. Laboratory open afternoons. This course must be accompanied or preceded by Chemistry 151-152. Mr. McPherson, Mr. Boord, Mr. Galloway.

The preparation of typical organic compounds.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157-158. Physical Chemistry. Three credit hours. The year. Prerequisite, Chemistry 113-114, 119-120, 151-152, Physics 112 except by special permission of the instructor. Mr. Mack.

This is a general course in physical chemistry.

161. Physical Chemistry. Two or three credit hours. Either semester. Six or nine laboratory hours each week. Prerequisite or concurrent, Chemistry 157-158. Mr. Mack.

An elementary course in physico-chemical measurements, including such topics as molecular weights and conductivity.

187. **Inorganic Preparations.** Three credit hours. Either semester. One recitation and six laboratory hours each week. Laboratory open afternoons. Prerequisite, Chemistry 114 and 120. Mr. Henderson.

The preparation of a limited number of compounds chosen so as to give practice in the preparation of inorganic compounds.

132. **The Teaching of Chemistry.** Two credit hours. Second semester. Two recitations or conferences each week. Elective. Prerequisite, Chemistry 105-106 (or 109-110), 119, 151-152. Mr. McPherson.

171. **Chemical Bibliography.** One credit hour. First semester. Lecture, quiz, and laboratory practice. Prerequisite, twenty-six collegiate credit hours of chemistry. Mr. Boord.

A course in the use of chemical literature.

173. **Chemical Biography.** Two credit hours. First semester. Two lecture-recitations each week. Prerequisite, Chemistry 113-114, 119-120, 151-152. Mr. Henderson.

Designed to familiarize advanced undergraduate students with the leading personages in chemistry, particularly in recent and contemporary times.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ECONOMICS AND SOCIOLOGY

Office, 5 Page Hall

PROFESSORS HAGERTY, HAMMOND, HUNTINGTON, RUGGLES, AND
NORTH, ASSISTANT PROFESSORS WALRADT, MARK, AND
DICE, MR. HELD, MR. GETTYS, MR. CLARKE, MISS
SHEETS, MR. PIKE, MR. WALL, MR. ECKELBERRY,
AND DEPARTMENT ASSISTANTS

ECONOMICS

The following courses are open only to advanced undergraduates and graduates: 119, 141, 144, 159, 160, 165, 166, 203, 204, 207-216.

101-102. **Principles of Economics.** Three credit hours. The year. Not open to freshmen. Should precede all courses in Economics except 132, 133, concurrent 139. Mr. Hammond, Mr. Ruggles, Mr. Dice, and instructors.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Text-book, lectures and individual investigation.

Economics 102 is given also during the first semester. Mr. Walradt and instructors.

Economics 101 is given also during the second semester. Mr. Walradt and instructors.

119. Women in Industry. Three credit hours. First semester. Prerequisite, Economics 101-102 or Sociology 101-102. Miss Mark.

A study of the economic position of women. Their relation to the household; their industrial and commercial opportunities; their preparation for various occupations. Legal, social and industrial problems created by the entrance of women into the field of industry.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102, or Economics 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effect upon the home. Organization of the household with reference to the functions of man and woman.

132. Principles of Social Geography. Three credit hours. Either semester. Not open to juniors and seniors. Prerequisite to all courses in economic geography. Mr. Huntington.

The geographic factors in environment: land, water, climate, plants and animals; their influence upon man, his distribution and his activities; and the uses which man makes of his geographic environment to gratify his manifold wants.

133. Economic Geography. Three credit hours. Second semester. Not open to juniors and seniors. Prerequisite to all advanced courses in economic geography. Mr. Huntington.

The influences of geographic environment, with special reference to North America.

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 101-102.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141.

A critical examination of tax systems with particular reference to questions of incidence and of proposed reforms. The Ohio system of taxation will be given special consideration.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Huntington.

A study of the basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

NOTE: Additional courses in geography may be found listed in the department of Geology and in the bulletin of the College of Commerce and Journalism.

160. International Commercial Policies. Three credit hours. First semester. Prerequisite, Economics 101-102.

Theory of international trade; historic policies, mercantilism, free-trade and protection. A study of the tariff policy of the United States, with a comparative study of the policies of the British Empire, France and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Hammond.

A study of the labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. Industrial Relations. Three credit hours. Second semester. Prerequisite, Economics 101-102. Mr. Hammond.

An account of the labor movement at home and abroad. Special attention is given to the policies of organized labor in the United States. The progress of collective bargaining and trade agreements. Recent efforts to secure an increased participation of labor in the work of industrial management and to develop friendly relations between employers and employed.

FOR GRADUATES

201-202. History of Economic Thought.

207-208. Seminary in Economics.

209-210. Research in Corporations and Labor.

211-212. Research in Transportation and Public Utilities.

213-214. Research in Banking and Finance.

*215-216. Research in Economic and Social Statistics.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SOCIOLOGY

The following courses are open only to advanced undergraduates and graduates: 104, 131, 134, 201, 202, 207, 208.

101-102. Principles of Sociology. Three credit hours. The year. Not open to freshmen. Mr. Hagerty, Mr. North, Miss Mark, Mr. Clarke Mr. Gettys.

A study of the fundamental principles of sociology. Text-book, lectures, collateral reading and individual investigation. Sociology 101 is given also during the second semester. Sociology 102 is given also during the first semester.

104. The Immigrant. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Clarke.

The causes and sources of migration, the characteristics and standard of living of the immigrant; immigration laws.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102.

*Not given in 1920-1921.

A study of the matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman and Medieval periods. The modern family, its functions and its problems.

123. Anthropology. Three credit hours. First semester.

An elementary study of the essential characteristics of mankind and of the distinguishing traits of the several races of men; the origin and development of various races. Anthropological problems. Text-book, lectures, discussion and readings.

124. Ethnology. Three credit hours. Second semester.

Prerequisite, Sociology 123.

A genetic study of the social, occupational, and mental life of the several races of men. The origin and development of the various institutions and activities which have had their beginning in primitive society. Ethnological problems. Text-book, lectures, discussion and readings.

127. Leisure and Recreation. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101. Mr. Gettys.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problem of modern communities from the standpoint of control and of public provision. Recreation surveys.

128. Social Organization and Administration of Recreation Facilities. Three credit hours. Second semester. Prerequisite, Sociology 127. Mr. Gettys.

Methods and means of control of commercialized recreation with especial reference to American cities and towns. The promotion and organization of public and semi-public agencies. The administrative control of playgrounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

131. The Criminal. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

The social, economic and physiological causes of crime. The changing character of crime as modified by the legal code.

Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

134. American Race Problems. Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Clarke.

Characteristics of the Negro, the Indian, the Mexican, and the Oriental; problems of assimilation.

FOR GRADUATES

201-202. Advanced Sociology.

207-208. Seminary in Sociology.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSOR FRENCH, ASSISTANT PROFESSORS MEIKLEJOHN, WILLIAMS, TURNBULL, AND SVENSEN, MR. FIELD, MR. EAGLE, MR. PAFFENBARGER, AND DEPARTMENT ASSISTANTS

101. Elementary Mechanical Drawing. Two credit hours. Either semester. Mr. French and department assistants.

Practice in the use of drawing instruments, elementary projections.

102. Mechanical Drawing. Three credit hours. Either semester. Prerequisites, Engineering Drawing 101 or 139. Mr. French and department assistants.

103. Descriptive Geometry. Three credit hours. First semester. Prerequisite, Engineering Drawing 102. Mr. French and department assistants.

Two recitations and one two-hour drawing period each week.

104. Machine Drawing. Three credit hours. Second semester. Prerequisite, Engineering Drawing 103. Mr. Williams, Mr. Svensen.

One lecture and two two-hour drawing periods each week.

139. Drawing for Manual Arts Teachers. Four credit hours. First semester. Industrial Education, first year.

140. Drawing for Manual Arts Teachers. Three credit hours. Second semester. Prerequisite, Engineering Drawing 139. Industrial Education, first year.

131-132. The Teaching of Mechanical Drawing. Three credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT, GRAVES AND KETCHAM,
ASSISTANT PROFESSORS COOPER, BECK, ANDREWS AND PER-
CIVAL, MR. CRAIG, MR. WILEY, MISS DOLLINGER, MISS
SNIFFEN, MR. ESPER, MR. TAIT, MR. FRENCH, AND
DEPARTMENT ASSISTANTS

101. Paragraph Writing: Description and Narration. Two credit hours. Either semester. Text: Scott and Denney's Paragraph Writing, and Duncan, Beck and Graves's Specimens of Prose Composition. All instructors.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session.

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisite, English 101, 104. Mr. Beck, Mr. Craig.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisite, English 101, 104, 105. Mr. Beck, Mr. Craig.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisite, English 101, 104. Mr. Graves.

The number admitted to this course is limited to thirty. Special permission necessary.

108. Advanced Composition. Two credit hours. Second semester. Prerequisite, English 101, 104. Mr. Graves.

The number admitted to this course is limited to thirty. Special permission necessary.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Text-book: Greenough and Kittredge's Words and their Ways in English Speech.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves, Mr. Andrews.

Second semester: Mr. Cooper, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant and Poe; of Hawthorne, Emerson, Whittier, Longfellow and Lowell; and of Walt Whitman; with a brief survey of recent literature.

141. Nineteenth Century Poetry. Three credit hours. First semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Wordsworth, Shelley, Keats, and their contemporaries.

142. **Nineteenth Century Poetry.** Three credit hours. Second semester. No prerequisite course. Mr. Taylor, Mr. Cooper, Mr. Andrews.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris and Meredith.

145. **Nineteenth Century Prose.** Three credit hours. First semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Coleridge, Lamb, Landor, DeQuincy, Hazlitt and Carlyle.

146. **Nineteenth Century Prose.** Three credit hours. Second semester. No prerequisite course. Mr. Denney, Mr. Graves, Mr. Beck, Mr. Percival.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

136. **Eighteenth Century Poetry and Prose.** Three credit hours. First semester. Prerequisite, ten hours of English. Mr. Percival.

After some consideration of the classical poetry of Pope and his contemporaries, the development of romantic poetry is studied in the works of Thomson, Gray, Collins, Burns, Goldsmith, Cowper, Blake, Crabbe and others.

137. **The Life and Times of Dr. Johnson.** Three credit hours. Second semester. Prerequisite, English 136. Mr. Percival.

A study of the life of Dr. Johnson, and of the manners and currents of opinion of his time, based principally on Boswell's Life of Johnson supplemented by readings in the Letters of Horace Walpole, the Journal of John Wesley, and various essays on eighteenth century topics.

157. **Versification.** Three credit hours. First semester. This course is limited to thirty members. Open only to juniors and seniors. Special permission necessary. The course should be preceded by a year-course in poetry. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

159. Milton and his Contemporaries. Two credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Andrews.

The belles-lettres of the Puritan Revolution.

160. The Age of Dryden. Two credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Andrews.

167. Shakespeare: Histories and Tragedies. Three credit hours. First semester. Prerequisite, fourteen hours in English. Mr. Denney.

168. Shakespeare: Comedies and Romances. Three credit hours. Second semester. Prerequisite, fourteen hours in English. Mr. Denney.

181. The Teaching of English. Two credit hours. First semester. Prerequisite, ten hours in English. Mr. Denney.

FOR GRADUATES

201. History of the Short Narrative in English.

202. The Lyric.

*204. The College Teaching of English.

205. History of Critical Theory.

206. Problems in the Drama.

207. The Later Novel.

208. The Later Poetry.

209. English and Scottish Popular Ballads.

*210. English Usage.

212. The Celtic Renaissance.

213. The Technique of the Modern Drama.

214. The Technique of the Drama.

215-216. Studies in Seventeenth Century Literature.

217-218. Studies in Eighteenth Century Literature.

219-220. Discussion of Dissertations.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1920-1921.

PUBLIC SPEAKING

101. Public Speaking. Two credit hours. First semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Wiley.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

102. Debating. Two credit hours. Second semester. Prerequisite, English 101-104. Mr. Ketcham, Mr. Wiley.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

107-108. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, consent of the instructor. Mr. Ketcham.

A study of the great political and legal debates. Special applications of logic to argument. Practice in drawing briefs and presenting oral arguments on political and legal problems.

110. Advanced Debate Practice. Two credit hours. Second semester. Two practice periods each week. Prerequisite, consent of the instructor. Mr. Ketcham.

An advanced course for students showing special ability in debate.

114. Extempore Speaking. Two credit hours. Second semester. Prerequisite, Public Speaking 102. Mr. Wiley.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

***121-122. Masters of Public Address.** Two credit hours. The year. May be taken with Public Speaking 101 and 102, but may not precede them. Given biennially. Mr. Ketcham.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment, and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry,

*Not given in 1920-1921.

Webster, Clay, Calhoun, Lincoln, Beecher and Phillips. Lectures, readings and reports.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisite, Public Speaking 101-102. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominating speeches; after dinner speaking; discussions of current events; political, business and social addresses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

151-152. Special Problems in the Theory of Public Speaking. Two credit hours. The year. Prerequisite, Public Speaking 101-102 and four additional credit hours in public speaking. Given biennially. Mr. Ketcham.

The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals and aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

EUROPEAN HISTORY

Office 305, University Hall

PROFESSORS SIEBERT, McNEAL, AND PERKINS, ASSISTANT PROFESSORS WASHBURNE AND KNIPFING

101. Medieval History. Three credit hours. First semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Washburne, Mr. Knipfing.

102. Modern History from 1500 A. D. Three credit hours. Second semester. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Washburne, Mr. Knipfing.

European History 101 is given also during the second semester.

European History 102 is given also during the first semester.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third and fourth year students. Mr. Perkins.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

105. **History of Greece.** Three credit hours. First semester. No prerequisite for second, third and fourth year students. Mr. Knipfing.

106. **History of Rome.** Three credit hours. Second semester. No prerequisite for second, third and fourth year students. Mr. Knipfing.

*119-120. **History of Germany.** Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

121-122. **History of France.** Two credit hours. The year. No prerequisite for second, third and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

131-132. **The World War: its Causes, Issues, and Results.** Three credit hours. The year. Not open to freshmen. Mr. McNeal, Mr. Hockett, Mr. Wittke, Mr. Washburne.

This course deals with the remote and immediate underlying causes of the great War, the issues involved among the nations, with special emphasis on the relation of the United States to the conflict, the problems and issues in its settlement, and the consequent national and international reconstruction.

While not required it is suggested that a collegiate course in European history, or American history or political science may with advantage precede this course.

135-136. **The History of Civilization.** Three credit hours. The year. Prerequisite, European History 101-102. All instructors.

*Not given in 1920-1921.

A survey of economic, social and intellectual progress in ancient, medieval, and modern Europe.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisite, European History 101, 102. Mr. Siebert.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisite, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

123-124. Europe from 1815 to 1920. Three credit hours. The year. Prerequisite, European History 101, 102. Mr. Perkins.

The history of central and western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. History of the Church in Western Europe. Two credit hours. The year. Prerequisite, European History 101, 102. Advanced students from other departments admitted without the prerequisite. Mr. Knipfing.

129-130. Historical Literature and Method. Two credit hours. The year. Two lectures each week. Prerequisite, European History 101-102, and at least one other year course in the department. Mr. Siebert, Mr. McNeal, Mr. Perkins, Mr. Knipfing.

An introduction to the chief sources for the various divisions and periods of European history, and a characterization of the principal secondary authorities. Exercises in historical bibliography and method. Designed for students specializing in European history.

141-142. The History of the Expansion of Europe. Two credit hours. The year. Prerequisite, European History 101-102. Mr. Washburne.

143-144. The History of the Slavic Peoples of Europe. Two credit hours. The year. Prerequisite, European History 101-102. Mr. Siebert.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert, Mr. Perkins.

This course will most naturally be taken as a continuation of American History 121 (Teacher's Course), the two semesters forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History 101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

FOR GRADUATES

203-204. Seminary in European History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FRENCH

(See Romance Languages and Literatures)

GEOLOGY

Office, 104 Orton Hall

PROFESSORS BOWNOCKER AND CARMAN, ASSISTANT PROFESSORS HILLS AND TUCKER, MISS MORNINGSTAR, MR. LAMBORN

101-102. Physiography. Three credit hours. Either semester. Open to freshmen and sophomores only. Mr. Hills, Mr. Tucker.

In Geology 101 Saturday field trips or laboratory work during the week will be substituted for one lecture period throughout the semester. Physiographic features of the earth's surface; the ocean and the atmosphere.

103. **Physical Geology.** Three credit hours. First semester. Mr. Bownocker.

Introductory course. Petrographical, structural and dynamical geology. Study of common minerals and rocks and geological maps. The course is illustrated with lantern views, models, and museum materials.

104. **Historical Geology.** Three credit hours. Second semester. Recitations, lectures, laboratory, and field trips. Prerequisite, Geology 101 or 103. Mr. Carman.

A study of the geological history of North America, its physical history, life development and structure. The course deals with the classification and distribution of the geological formations, especially those of Ohio, and with the characteristic fossils of each system. During the second half of the semester there will be several field trips on Saturdays.

121. **Introduction to Geography.** Three credit hours. First semester. Lectures, assigned reading and laboratory. Mr. Tucker.

The fundamental principles of geography. An introductory study of the relation of the lithosphere, hydrosphere and atmosphere to life, especially the life of man.

*122. **Geography of North America.** Three credit hours. Second semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

North America in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the North American people.

124. **Physical and Regional Geography of Europe.** Three credit hours. Second semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

Europe in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the European people. Offered in 1920-1921.

*Not given in 1920-1921.

***125. Geography of Asia.** Three credit hours. First semester. Lectures, assigned reading and laboratory. Prerequisite, Geology 121. Mr. Tucker.

Asia in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the Asiatic people, especially the people of India, China, Japan and Siberia.

128. The Teaching of Geography. Three credit hours. Second semester. Lectures, assigned reading, laboratory and field work. The field work will replace laboratory when given. Mr. Tucker.

The subject matter of geography will be used to develop appropriate methods of teaching the subject in the elementary and secondary schools.

NOTE: Additional courses in geography may be found listed in the department of Economics and Sociology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Stratigraphic Geology of Ohio. Three credit hours. First semester. Prerequisite, Geology 101 or 103 and 104. Mr. Carman.

Field trips, laboratory work, lectures, and assigned readings. Field trips on Saturdays (entire day) while the weather permits.

The geological formations of central Ohio are studied in the field and those formations more distant from Columbus are studied by rock specimens and assigned readings. This course is intended to acquaint the student with the ordinary methods of field investigations, such as the measurement and description of geological sections, the making of geological maps, the collection and identification of specimens, and the preparation of reports describing the regions studied.

116. Physiography of the United States. Three credit hours. First semester. Prerequisite, Geology 101-102. Mr. Hills.

The study of each large physiographic province of the United States with a detailed description and analysis of the present topography.

*Not given in 1920-1921.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101 or 103 and 104. Mr. Hills.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned readings and map work. The second half, largely to field work and the preparation of reports, the field work being on Saturdays.

FOR GRADUATES

201-202. Advanced Historical Geology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317 University Hall

PROFESSORS M. B. EVANS AND EISENLOHR, ASSISTANT PROFESSORS THOMAS AND BARROWS, MR. KOTZ

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic and practice courses. The linguistic and practice courses are intended primarily for students who desire to make direct professional use of the language.

German 107-131 require as prerequisite German 104 or equivalent. A combination of German 131-132 with German 107-108 or 117-118 is advised. The prerequisite for the group "For Advanced Undergraduates and Graduates" is at least one year-course in the group 107-118 or the equivalent.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 102 is given also during the first semester.

German 101 is given also during the second semester.

103. Intermediate German. Four credit hours. Either semester. Prerequisite, German 101-102 or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose; grammar review; prose composition.

German 103 is given also during the second semester.

104. Easy Classical Reading and Composition. Four credit hours. Either semester. Prerequisite, German 103 or three

entrance units in German. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

German 104 is given also during the first semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, and sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year.

A rapid reading course. Throughout the year practice in speaking and writing German. First semester: Nineteenth Century Novel. Second semester: Nineteenth Century Drama.

117-118. Schiller: Introduction to Life and Works. Two credit hours. The year. Miss Thomas.

First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Krieg.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Eisenlohr.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

***173. The Teaching of German.** Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports and practice teaching. Open only to seniors and graduate students.

*Not given in 1920-1921.

179-180. Proseminary: Eighteenth and Nineteenth Century Literature. Two or four credit hours. The year. Mr. Eisenlohr, Mr. Evans.

The course will be divided into two two-hour sections, which may be taken together or separately. The list of authors to be studied will vary from year to year. For 1920-1921 the selection will be:

First semester—

179a, Lessing: Emilia Galotti, Nathan der Weise, Hamburg Dramaturgy (Selections). Mr. Eisenlohr.

179b, Goethe: Goetz von Berlichingen, Die Leiden des jungen Werthers, Tasso. Mr. Evans.

Second semester—

180a, Scheffel: Ekkehard, Trompeter von Saekkingen. Mr. Eisenlohr.

180b, Hebbel; Agnes Bernauer, Herodes and Mariamne, Die Nibelungen. Mr. Evans.

This course is intended to serve as an introduction to a more intensive study of German literature. There will be informal lectures in German and English, discussions and reports; also practice in speaking and writing German.

175. Phonetics. Two credit hours. First semester. No prerequisites. Not open to first and second year students. Miss Barrows.

Speech sounds with special reference to German, French and English.

181-182. Minor Investigation. Two credit hours. The year. Prerequisite, at least two year-courses in the group for advanced undergraduates and graduates. Mr. Evans, Mr. Eisenlohr, Miss Thomas, Miss Barrows.

Investigation of minor problems in the various fields of German literature and philology.

FOR GRADUATES

***201-202. Advanced Middle High German.**

***203. Gothic.**

***204. Old High German.**

*Not given in 1920-1921.

*212. Methodology.

214. Experimental Phonetics.

215-216. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 200A University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year. Mr. Bolling.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Mr. Bolling.

Greek 115 is not a prerequisite for Greek 116.

Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities. A knowledge of Greek is not required.

125. Plato. Four credit hours. First semester. Prerequisite, Greek 101-102. Mr. Bolling.

Readings in the shorter dialogues; exercises in Greek prose.

126. Homer. Four credit hours. Second semester. Prerequisite, Greek 125. Mr. Bolling.

Readings in the Iliad: exercises in Greek prose.

129-130. Attic Orators, Drama or Plato. Three credit hours. The year. Prerequisite, Greek 125-126.

131-132. Greek Prose Composition. One credit hour. The year. Prerequisite, Greek 125, 126.

*123-124. Life and Literature of the Greeks. Two credit hours. The year. No prerequisite. Mr. Bolling.

Lectures on private life; on epic, lyric and dramatic poetry; on the historians, the philosophers and orators.

133-134. Life and Literature of the Greeks. Two credit hours. The year. No prerequisites. Mr. Bolling.

*Not given in 1920-1921.

These courses consist partly of lectures, and partly of assigned reading in translations from the Greek epic and lyric poets and historians (123-124) alternating each year with a similar treatment (133-134) of the tragic and comic poets, the philosophers, and the orators.

A knowledge of Greek is not required and the work may be begun in any semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

141. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

121-122. Historical Greek Grammar. Two to four credit hours, according to the needs of applicants. The year. Mr. Bolling.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not pre-suppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

***127-128. Proseminary in Greek.** Two credit hours. The year. Elective. Prerequisites, one year of elementary Greek, and the equivalent of at least four semester courses of college Greek. Mr. Bolling.

151-152. Readings and Lectures. Two to four credit hours. The year. Mr. Bolling.

Study of the language, style, and works of some author or group of authors chosen each year to meet the particular needs of the class.

Courses 115-116, 121-122, 123-124, 143-144 are planned to meet the needs of students who have no knowledge of Greek.

*Not given in 1920-1921.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 100 Hayes Hall

PROFESSOR ANDERSON

101-102. History of Education. Three credit hours. The year. Prerequisite, one year's work in European history, philosophy or psychology. Mr. Anderson.

Text: Graves's *A History of Education* (three volumes).

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102 and Philosophy 151-152. Mr. Anderson.

105-106. Educational Classics. Two credit hours. The year. Prerequisite, History of Education 101-102, Psychology 101-102. Mr. Anderson.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel and Spencer. Reports and conferences.

107-108. Comparative Education. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England and the United States.

109-110. History of Education in the United States. Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

112. History of Industrial Education. Two credit hours. Second semester. Prerequisite, History of Education 101-102 or equivalent. Open to seniors and graduates only. Mr. Anderson.

FOR GRADUATES

201-202. Seminary in the History of Education.

203-204. Seminary in Educational Philosophy.

206. A Special Survey of Source Materials and of General Literature in the Field of the History of Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 120 Home Economics Building

PROFESSORS WHITE AND VAN METER, ASSISTANT PROFESSORS HATHAWAY, WALKER, AND ADAMS, MISS SKINNER, MISS LINDER, MISS HAMBLIN, MISS BAINES, MISS DONNELLY, MISS McGUIRE, AND DEPARTMENT ASSISTANTS

101-102. Foods. Five credit hours. The year. Two lectures, one quiz and two laboratory periods each week. Prerequisite, Chemistry 106 or 110. Miss White.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost and value of the nutrients in the various food materials.

104. Sanitation. Three credit hours. Either semester. Three lectures each week. Prerequisite or concurrent, Bacteriology 107. Miss Linder.

A study of the interdependence of home and public agencies in securing and promoting sanitary and hygienic measures; location and construction of the house, water supply, plumbing, heating, ventilation, lighting, and home nursing.

111-112. Textiles. Two credit hours. The year. One lecture and one laboratory period each week. Prerequisite or concurrent, Art 119. Mrs. Walker.

The study of fibers and fabrics from a historic, economic and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs, and a comparison with commercially prepared articles.

Students having had previous work should consult with the instructor.

113. Dress. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Home Economics 111-112 and Art 121 prerequisite or concurrent. Miss Hathaway.

A study of the relation of economics, hygiene, and art to clothing. The drafting and designing of patterns, the selection of materials, and garment construction.

116. Dress. Three credit hours. Second semester. One lecture and two laboratory periods each week. Miss Hathaway. Continuation and amplification of Home Economics 113.

Outline of history of costume and continuation of the study of selection and combination of materials in their application to dress.

The lecture may be taken as a one-hour course without the laboratory.

118. The House. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Art 131, Home Economics 112, Home Economics 104, Economics 101, Art 141, either prerequisite or concurrent. Miss Donnelly.

A study of the evolution of the house and the principles underlying house arrangement, furnishing and decoration.

119. Household Management. Four credit hours. Either semester. Three lectures each week. Continuation of 118. Prerequisites, Economics 102, Art 141, Home Economics 102, 118, 104, or 110. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

The Home Economics practice apartment where the students live in groups for a period of time, affords opportunity for practice in household management.

121. Food Problems. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisites, Chemistry 106 or 110, Home Economics 101-102 and consent of the instructor. Miss Skinner.

Problems of markets, fuels, equipment and labor involved in selection, purchase, preparation and service of food.

127. Special Methods. Three credit hours. First semester. Prerequisites, Home Economics 101, 102, 111, 112, Psychology 101. Miss Van Meter, Miss Hathaway, Mrs. Adams.

This course is designed for students intending to teach Home Economics. Survey of Home Economics, examination

of courses of study, planning of lessons, study of various types of schools and methods for teaching the special phases of Home Economics work. Observations of such schools in operation. Three lecture hours each week and observation trips are required.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Proseminary. Two credit hours. Either semester. One lecture each week. Prerequisite, eighteen hours of required home economics work. Miss Van Meter.

Readings and reports on home economics topics. Problems assigned for individual research.

106. Proseminary. Two to five credit hours. Second semester. One lecture each week. Continuation of Home Economics 105. Prerequisite, Home Economics 105 and consent of the instructor. Miss Van Meter.

Special research continued. Reports and conferences.

110. Dietetics. Four credit hours. Either semester. Two lectures and two laboratory periods each week. Prerequisites, Home Economics 101-102, Physiology 101-102, Agricultural Chemistry 123-124. Miss Skinner.

A study of the chemical, physiological and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Translation of standard dietaries into food materials and some exercise in making dietary studies and in preparing food for the sick.

FOR GRADUATES

201-202. Research Course.

For description of graduate courses in this department see the Bulletin of the Graduate School.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Office, 212 Shops Building

PROFESSOR USRY, MR. SMITH

112. Materials and Methods. Three credit hours. Second semester. Industrial Education, fourth year.

Organization, supplies, courses of study, methods of presentation of subject, general procedure.

117-118. **Constructive Design.** Two credit hours. The year. Industrial Education, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of material to project. These problems will cover work in the upper elementary grades and the secondary school.

125. **Elementary Woodwork.** Two credit hours. Second semester. Industrial Education, first year. Mr. Usry, Mr. Smith.

Formerly Shopwork 133.

127-128. **Wood Turning and Pattern Making.** Three credit hours. The year. Prerequisite, Industrial Education 125. Industrial Education, second year. Mr. Usry, Mr. Smith.

Formerly Shopwork 129-130.

129. **Cabinet Making.** Three credit hours. Either semester. Prerequisite, Industrial Education 125 or Shopwork 101. Industrial Education, third year. Mr. Usry, Mr. Smith.

Formerly Shopwork 113.

131. **Advanced Cabinet Work.** Three credit hours. First semester. Prerequisite, Industrial Education 129. Optional, Industrial Education, fourth year. Mr. Usry, Mr. Smith.

Formerly Shopwork 131.

132. **Shop Planning and Equipment.** Three credit hours. Second semester. Industrial Education, fourth year.

Lectures and studies in planning and equipping the shop and in caring for the equipment. Industrial and school shops will be visited for the purpose of critical study.

133. **Electrical Work and Pipe Fitting.** Two credit hours. First semester. Industrial Education, third year.

The fundamental principles involved in elementary electrical construction and maintenance. The sanitary and practical applications of pipe fitting together with practical study of valves and special fittings. Lectures and laboratory work.

134. Sheet Metal Work. Two credit hours. Second semester. Industrial Education, third year.

Sheet metal lay out and construction. Practice in bending, forming, riveting, soldering, etc.

135. Craftwork for Women. Two credit hours. Either semester. Primarily designed for women in Home Economics.

Lectures and laboratory work dealing with the materials that enter into the construction of the home and its furniture, the finishing of these materials and the care of the finish, together with opportunity for selection of problems for making and finishing.

136. Craftwork for Women. Two credit hours. Either semester. Prerequisite, Industrial Education 135.

An advanced course, following 135. Particular attention paid to the craftwork feature.

137. Methods Related to Agricultural Industry. Two credit hours. Second semester. Prerequisite, Shopwork 101 and 103 or equivalent.

A course in Industrial Education methods specifically related to the agricultural community.

138. Correlated Industrial Work. Two credit hours. Either semester. For students in Agricultural Education (Smith-Hughes), designed to give experience and practice in the type of industrial work that meets the need of repairs and construction on the farm.

111. Teaching of Manual Training. Three credit hours. First semester. Industrial Education, fourth year.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up the strength. Point of view in industrial and vocational education; the part-time, cooperative, and trade school; night and continuation schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. Special Problems in Manual Training. Two credit hours. Either semester. For superintendents and principals. Mr. Usry.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, cost, selection of teachers, salaries, and ways to help the teacher in service. Open to seniors or graduates, or to men of experience acceptable to the instructor.

ITALIAN

(See Romance Languages and Literatures)

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS DERBY, HODGMAN, AND ELDEN, MR. SMITH

147. **Elementary Latin.** Four credit hours. First semester. Mr. Smith.

Grammar and exercises. This course is offered to students who have not studied Latin.

148. **Elementary Latin.** Four credit hours. Second semester. Prerequisite, Latin 147. Mr. Smith.

Caesar, four books and exercises.

149. **Cicero, Orations.** Four credit hours. First semester. Prerequisite, Latin 147-148 or their equivalent. Mr. Smith.

150. **Vergil, Aeneid.** Four credit hours. Second semester. Prerequisite, Latin 147-149 or their equivalent. Mr. Smith.

101. **Cicero, Livy, Horace, Aulus Gellius.** Four credit hours. First semester. Prerequisite, four units of preparatory Latin. Mr. Hodgman, Mr. Elden.

Cicero: *De Senectute* and *De Amicitia*; Livy; Horace: *Odes*; Aulus Gellius: *Selections*.

102. **Horace, Ovid, Livy, Sallust.** Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden.

Horace: Odes; or Ovid: Metamorphoses; Livy or Sallust, or Prose Composition.

103. Pliny or Cicero; Catullus or Tacitus. Three credit hours. First semester. Prerequisite, Latin 101, 102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: Selected letters. Catullus or Tacitus.

104. Latin Comedy. Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. Roman Satire. Two credit hours. First semester. Prerequisite, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

106. Roman Philosophy and Rhetoric. Two credit hours. Second semester. Prerequisite, Latin 101 to 104. Mr. Elden. Cicero and Quintilian.

107. Roman Private Life. Two credit hours. First semester. Prerequisites, Latin 101, 102. Mr. Derby.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Roman Art and Archaeology. Two credit hours. Second semester. Mr. Derby.

The course is open to undergraduates excepting freshmen, and to graduates.

The development of the arts and crafts in Italy, and especially of Roman architecture and the decorative arts. Open not only to students of Latin, but also to other students who are interested in the subject.

111-112. Roman and Comparative Literature. One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany and England.

113-114. Proseminary. Three credit hours. The year. Prerequisite, Latin 101-104. Mr. Elden.

115-116. Latin Prose Composition. Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. Advanced Latin Composition. One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman. Translation of English narrative and study of Latin idiom.

121. Roman Prose Authors. Two credit hours. First semester. Mr. Derby, Mr. Hodgman, Mr. Elden. Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Derby, Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Sounds and inflections. Pronunciation, ablaut, vowel and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Elden.

Syntax. Lectures on the problems connected with the origin and development of certain constructions in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in

graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned reading on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of textbooks; preparation of lessons; conduct of recitations; equipment, bibliography of books of reference, periodicals, etc.; illustrative exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

130. Practice in Reading at Sight. Two credit hours. Second semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Instruction and practice in reading at sight, reports, topics for investigation and other pertinent work.

***131-132. Roman Public Life.** One or two credit hours. The year. Prerequisite, Latin 103-104 or European History 106.

A brief survey of the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

FOR GRADUATES

201-202. Roman Religion.

203-204. Medieval Latin.

***207-208. Seminary.**

213-214. Elements of Epigraphy and Palaeography.

***215-216. Roman Antiquities and Archaeology.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1920-1921.

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOARD, SWARTZEL, KUHN, RASOR, AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT PROFESSORS PRESTON, BAREIS, RIETZ, AND BEATTY, MISS RICKARD, MR. WEAVER

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German and Italian by the beginning of the junior year, and to take some courses in philosophy, particularly logic, in the junior and senior years.

121. College Algebra and Trigonometry. Three credit hours. First semester. Mr. Swartzel, Mr. Arnold.

122. Plane Trigonometry and Analytical Geometry. Three credit hours. Second semester. Mr. Swartzel, Mr. Arnold.

125-126. History of Elementary Mathematics. Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. Analytical Geometry and Calculus. Three credit hours. The year. Prerequisites, Mathematics 122 or 132. Mr. Kuhn.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisite, entrance algebra and geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122, or 132. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr.

Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: Differential and Integral Calculus.

*163-164. Plane and Solid Analytical Geometry. Three credit hours. The year. Miss Bareis.

165-166. Advanced Calculus. Three credit hours. The year. Mr. Morris.

167-168. Differential Equations. Three credit hours. The year. Mr. Bohannan.

171-172. Projective Geometry. Three credit hours. The year. Miss Bareis.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

186. The Teaching of Mathematics. Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions and practice teaching.

FOR GRADUATES

201-202. Theory of Functions of a Complex Variable.

203. Fourier's Series and Spherical Harmonics.

204. Vector Analysis and its Applications.

205-206. Calculus of Variations.

207. History of Mathematics.

209-210. Theory of Statistics.

211-212. Groups.

*Not given in 1920-1921.

- 213-214. Differential Geometry.
- 215-216. Functions of a Real Variable.
- 217-218. Infinite Series and Products.
- 219-220. Theory of Numbers.
- 221-222. Theory of Invariants.

For description of graduate courses in this department see the Bulletin of the Graduate School.

MILITARY SCIENCE AND TACTICS

Office, The Barracks

CAPTAINS LEONARD, PARKER, WRIGHT, MURRAY, AND BENNER,
U. S. A., LIEUTENANT KAUFFMAN, U. S. A., AND
DEPARTMENT ASSISTANTS

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees therefore requires all male students, both special and regular, unless excused by the Military and Gymnasium Board, to drill during two years.

The Reserve Officers' Training Corps was established under the Defense Act of June 3rd, 1916, the required two years' work being included in its four year course. Instruction is given in Infantry and Field Artillery. Under ordinary circumstances this work is under six commissioned officers of the regular army, detailed for the purpose.

The total credit in this department allowed towards the degree of Bachelor of Science in Education is eight semester hours, exclusive of Infantry 101-102 and 103-104 or Field Artillery 105-106 and 107-108 which are required of all male students in the freshman and sophomore classes.

EITHER 101-102 OR 105-106 ARE REQUIRED OF ALL FIRST YEAR STUDENTS

101-102. Infantry. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. An elementary course including infantry drill, close and extended order, battle formations, formations for protection in hostile countries, etc., practice with gallery rifles

at any open hour, daily during the winter months. Lecture, one hour each week, by the President.

105-106. Field Artillery. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. Field artillery drill, administration, ordnance and materiel. Lecture, one hour each week, by the President.

EITHER 103-104 OR 107-108 ARE REQUIRED OF ALL SECOND YEAR STUDENTS

103-104. Infantry. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. A continuation of 101-102, with additional instruction in pistol practice, the bayonet and hand grenades.

107-108. Field Artillery. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. Artillery, motors, topography, and reconnaissance.

125-126. Advanced Military Science. For Infantry. Two credit hours. The year. Prerequisite, 101-102, 103-104, or equivalent. Five hours each week. Two hours are allotted to training as instructors in courses 101-102 or 103-104. Class room work three hours each week in advanced minor tactics, map problems, liaison, topography, field engineering, military law, technique of automatic rifles, machine guns and infantry cannon.

135-136. Advanced Military Science. For Field Artillery. Two credit hours. The year. Prerequisite, 105-106, 107-108, or equivalent. Five hours each week. Class room work three hours each week in field artillery, communication, gunnery, conduct of fire, tactics, care and training of horses. Practical work in horsemanship and training as instructors, two hours each week.

127-128. Advanced Military Science. For Infantry. Two credit hours. The year. Prerequisite, 125-126 or equivalent. Five hours each week. Two hours allotted to training as instructors in courses 101-102 or 103-104. Class room work three hours each week in topography, military policy of the United States, and advanced work in subjects under 125-126.

137-138. Advanced Military Science. For Field Artillery. Two credit hours. The year. Prerequisite, 135-136 or equivalent. Five hours each week. Class room work three hours each week in minor tactics and map maneuvers, military policy of the United States, military history, military law, care and training of horses. Practical work in horsemanship and practice as instructors, two hours each week.

SUMMER CAMPS

As a part of the instruction of the Reserve Officers' Training Corps at the University, summer camps are conducted for this district. Infantry, at Camp Custer, five miles from Battle Creek, Michigan; Field Artillery, at Camp Knox, Kentucky, thirty-one miles from Louisville. One summer camp for the students of the first two years is held between the first and second school years. This camp is voluntary.

The camp for the advanced course is held between the third and fourth years and is required. For special reasons the advanced course camp may be postponed until after the fourth year is completed.

These camps are of six weeks duration and the work is mostly practical. In addition to military work, field sports and competitions are conducted. The training for Infantry includes firing on the target range with service rifles and using ball ammunition in combat. The training for Field Artillery includes firing field guns with service ammunition. The development of leadership and discipline are primary subjects of these camps.

The Government furnishes transportation to and from the camps. While in camp, clothing, subsistence, medical attention and entertainment are provided.

PHILOSOPHY

Office, 321 University Hall

PROFESSOR LEIGHTON, ASSISTANT PROFESSORS CHANDLER, AVEY,
AND WILLIAMS

The courses in philosophy fall into three groups: the first, open to freshmen, 101-102; the second, not open to freshmen but having no prerequisites, 105-106, 107-108, 138-139; the third comprises the remaining courses, which are of more advanced character and have special prerequisites.

Freshmen beginning philosophy must take 101-102. Sophomores beginning philosophy may take either 101-102 or one of the courses of the second group. Juniors and seniors beginning philosophy should take one of the courses in the second group.

The following courses are of special interest to students in the fields indicated: 121-122 is included in all as being fundamental to all human interests; for students of literature and fine arts, 101-102, 107-108, 145-146, 121-122; for students of mathematics and non-biological science, 101-102, 107-108, 121-122; for students of psychology, biological and social science, 101-102, 105-106, 111-112, 150, 145-146, 121-122; for students of education, 101-102, 105-106, 107-108, 109, 134, 145-146.

101. Introduction to Philosophy. Three credit hours. Either semester. Open to freshmen. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state and religion.

102. Introductory Logic. Three credit hours. Either semester. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams. A practice course in the methods of correct thinking.

105. Elementary Ethics. Three credit hours. First semester. Not open to freshmen. Mr. Leighton, Mr. Williams. An introductory study of the chief theories of the moral life.

106. Elementary Ethics: History of Moral Ideas and Practices. Three credit hours. Second semester. Not open to freshmen. Mr. Chandler, Mr. Williams.

A historical study of the chief stages in moral evolution—tribal morality, the moral ideas of the ancient Hebrews and Greeks, medieval society, and modern industrialism.

115-116. Esthetics. Two credit hours. The year. Not open to freshmen. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

107. History of Ancient and Medieval Philosophy. Three credit hours. First semester. Not open to freshmen. Mr. Chandler, Mr. Avey.

The development of Greek philosophy; early Christian philosophy, the medieval schools.

108. History of Modern Philosophy. Three credit hours. Second semester. Not open to freshmen. Mr. Chandler, Mr. Avey.

The development of modern philosophic thought from Francis Bacon and Descartes to Charles Darwin and Herbert Spencer.

***109. The Present Conflict of Ideals.** Three credit hours. First semester. Not open to first and second year students. Mr. Leighton.

An untechnical account and interpretation of the significance for ethical, social, and educational doctrine and practice, of the chief life-views of the present and immediate past,—evolutionism, naturalism, idealism, pragmatism, the philosophies of aristocracy, democracy, syndicalism, nationalism, and internationalism; the spiritual characteristics of the present age. Designed especially for persons preparing for teaching, social work, journalism, and the ministry.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***119. Philosophy of Religion.** Three credit hours. Second semester. Prerequisite, one year's work in philosophy, psychology or history of religion. Mr. Leighton.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

121-122. Metaphysics. Three credit hours. The year. Prerequisites, at least one year's work in philosophy and in psychology or a natural science. Mr. Leighton.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality and theism.

*Not given in 1920-1921.

***123-124. Representative Ancient Philosophers.** Three credit hours. The year. Prerequisite, one year in philosophy and one year in a related subject. Mr. Chandler.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

125-126. Representative Modern Philosophers. Three credit hours. The year. Prerequisite, Philosophy 101-102 or 107-108. Mr. Chandler.

Selected works of Leibniz, Hume, Kant and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

134. Political and Social Philosophy. Two credit hours. First semester. Prerequisite, one year in philosophy or in biological science or in social science. Mr. Leighton.

The ethical values and aims involved in social institutions and their evolution, with especial reference to the state, the family, economic activities, and education; an examination of the ethical and metaphysical problems involved in the relation of the individual to society, and the philosophy of history.

141-142. The Main Currents in Contemporary Philosophy. Two credit hours. The year. Prerequisite, one year in philosophy. Mr. Chandler.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science and social movements.

***145-146. Philosophy of History.** Two credit hours. The year. Prerequisite, any two of Philosophy 101, 105, 106, 111, 134, 107, 108, and one year's work in European history. Mr. Leighton.

A critical examination of the principal theological and philosophical theories of the meaning of history and human progress in the light of ethics and the philosophy of values, with a view to arriving at correct conceptions of the meaning of history and the fact and nature of progress, especially ethical and intellectual progress. The theories dealt with will be chiefly those of the Church fathers, of the German philosophers from

*Not given in 1920-1921.

Lessing to Nietzsche, Dilthey, Windelband, Rickert, Simmel and Eucken; and of Comte, Spencer, Buckle, Carlyle, and contemporary English and American thinkers. Intended for students of literature, history, politics and sociology.

150. Pragmatism. Two credit hours. Second semester. Prerequisite, one year in philosophy or in biological science or in social science. Mr. Williams.

An account and critical estimate of the movement known as pragmatism and its later form, instrumentalism, with special reference to the work of William James, F. C. S. Schiller, and John Dewey.

FOR GRADUATES

201-202. Seminary in Philosophy.

207-208. Contemporary Philosophical Issues.

209-210. Discussion of Current Philosophical Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION

MEN

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE, CASTLEMAN, AND NICHOLS, ASSISTANT PROFESSOR TRAUTMAN, MR. OHLSON

Students in the College of Education may take courses in physical education as a minor—twelve semester hours, in addition to the required courses 101-102 (men) or 131-132, 133-134 (women)—on the approval, in each case, of the Head of the Department of Physical Education and the Dean of the College.

Juniors and seniors not taking physical education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than six semester hours. In each case the approval of the Head of the Department and the Dean of the College of Education is necessary.

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of all freshmen in this college. During the first semester the course consists of one

lecture on personal hygiene and one period of active physical exercise each week.

Personal Hygiene: Lectures and quizzes on the cause, prevention, and hygienic treatments of the common preventable diseases and conditions which lower the vitality and interfere with the health and efficiency of the student.

Physical Exercise in Class: A graded course of free-hand exercises, with light hand apparatus for the relief and correction of slight bodily defects, improper carriage; graded progressive exercises to promote muscular tone, organic vigor, bodily skill; class dancing, gymnastic and athletic games and contests.

107. Organization and Administration of Physical Education in Secondary Schools. Two credit hours. First semester. Elective. Mr. St. John, Mr. Wilce, Mr. Castleman.

Consideration of problems of organization for general intramural physical activity. Organization, administration, and control of competitive athletics.

110. Theory of Physical Education. Two credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

111. Principles of Coaching Track and Field Sports. One credit hour. First semester. Mr. Castleman.

Instruction and practical demonstration in the usual track and field events. A study of the rules and scoring methods. The management of meets. Problems of training. Adaptation of track and field events to large group contests.

112. Principles of Coaching Football. One credit hour. Second semester. Mr. Wilce.

A consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, pedagogy and methods of coaching. Laboratory will consist of field work and observation under direction.

113. Principles of Coaching Baseball and Basketball. One credit hour. First semester. Mr. St. John.

A study of batting, base running, playing all positions, methods of coaching. A course in fundamentals. Basketball: a study of individual and team play, offensive and defensive, practice methods. A knowledge of the rules of baseball and basketball is a prerequisite.

120. Anthropometry and Physical Diagnosis. Two credit hours. Second semester. Elective. Prerequisite, Physiology 101-102. Mr. Castleman, Mr. Nichols.

Theory of taking and keeping records of physical history of students. Anthropometric measurements. Preliminary examination of eye, ear, nose, throat, lungs, heart, back, feet, with interpretation of knowledge obtained.

122. Teaching of Physical Education. Two credit hours. Second semester. Elective. Prerequisites, Physiology 101-102, Psychology 101-102, and previous satisfactory physical training. Mr. Nichols.

One hour theory of teaching and two hours practice of gymnastics, calisthenics, and general floor work and handling of squads.

125. Hygiene and First Aid. Two credit hours. First semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

A study of the basic principles of health and their application in personal hygiene with particular reference to physical education. Principles and methods of first aid, emphasizing conditions arising in connection with physical education.

The above courses are open to third and fourth year students on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

WOMEN

ASSISTANT PROFESSOR MEYER, MISS SCOFIELD, MISS RANCK

131-132. Physical Education. One credit hour. The year. Four hours each week. Required of all women students during the first year of attendance at the University.

Lectures on personal hygiene.

Gymnasium exercises, elementary Swedish gymnastics, calisthenics, drills with wands, Indian clubs, etc. Folk dances, technique of aesthetic dancing, and gymnastic games.

133-134. Physical Education. One credit hour. The year. Four hours each week for second year students; required of all women students.

Lectures on principles of physical education.

Gymnasium exercises, a continuation of Physical Education 131-132.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Two lectures, three hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Two lectures and three hours' practice each week. Prerequisite, Physiology 101-102. Miss Meyer.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

NOTE: The above courses are open only to juniors and seniors on approval of the department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing courses 135 and 136 should have had courses in anatomy, physiology, psychology and history of education.

Physical Education 125 for men is also open to women who desire to minor in Physical Education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARHART, BLAKE, AND ALPHEUS W. SMITH,
ASSISTANT PROFESSOR HEIL, MR. WOODBURY, MR. ALVA W.
SMITH, MR. DITTO, MR. SERVICE, MR. WARD, MR.
JARVIS, AND DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures and laboratory. A non-mathematical course for students who have no entrance credit in physics. Mr. Ditto, Mr. Service.

105-106. General Physics. Four credit hours. The year. Three recitations and one three-hour laboratory period. Prerequisite, entrance credit in physics. Mr. Earhart, Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Heil.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Heil.

This course alternates with Physics 143-144.

***143-144. Advanced Light and Electricity.** Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106, Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism, Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. Proseminary in Physics. One credit hour. The year. Prerequisite, two years of college work in physics or one year in physics and one in mathematics or chemistry. Mr. Cole.

147. Molecular Physics and Heat. Three credit hours. First semester. Prerequisites, Physics 103-104 or 105-106 and Mathematics 141-142 or 127-128. Mr. Earhart.

148. Conduction of Electricity Through Gases and Radioactivity. Three credit hours. Second semester. Prerequisites, Physics 103-104 or 105-106, and Mathematics 141-142 or 127-128. Mr. Heil.

This course alternates with Physics 143-144.

169-170. Theory of Light. Two credit hours. The year. Prerequisite, Physics 105-106 and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

*Not given in 1920-1921.

FOR GRADUATES

201-202. Research Laboratory.

*203-204. Theoretical Mechanics.

*205-206. Thermodynamics and Electrolytic Conduction.

207-208. Theory of Electricity and Magnetism.

211-212. Theory of Oscillations with Applications to Wireless Telegraphy.

*213-214. Conduction of Electricity Through Gases and Radioactivity.

215-216. Electromagnetic Theory.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

Office, 104 Biological Hall

PROFESSORS BROOKS AND BLEILE, ASSISTANT PROFESSORS SEYMOUR AND McPEEK, MR. DURRANT, AND DEPARTMENT ASSISTANTS

Physiology 101-102 is the foundation course offered by the department and is prerequisite to advanced work. For Arts and Arts-Education students, or others who expect to teach in biological subjects, the following sequence of courses would seem desirable:

Course 101-102 (accompanied by 137-138) followed by 115 and 118 or 106, and these courses succeeded by 109-110 or 111-112. Advanced laboratory courses should be preceded or accompanied by advanced physics and chemistry courses. A foundation knowledge of comparative anatomy or of embryology will also prove helpful in advanced physiology.

Course 119-120 has been arranged to present fundamental principles of physiology in a non-chemical manner to students who have had no training in chemistry, but this course is not acceptable as a prerequisite for advanced work.

101-102. Physiology. Three credit hours. The year. Not open to freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including demonstrations in circulation, digestion, respiration, gross and mi-

*Not given in 1920-1921.

nute anatomy, reflex actions, and other simple phenomena of living organisms.

137-138. Physiology Laboratory. One credit hour. The year. Must be accompanied by Physiology 101-102, which course it is intended to supplement by experimental work. One laboratory period of two hours each week Mr. Durrant.

106. Chemical Physiology. Four credit hours. Second semester. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the physiology of the body fluids, foods, digestion, absorption, excretion, and metabolism.

119-120. General Physiology. Three credit hours. The year. Not open to freshmen. Mr. Bleile.

A course similar to 101-102 open to students who have no credit in chemistry. (Students who have had chemistry will elect Physiology 101-102.) A course presenting the principles of physiology in a non-chemical manner.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations and assigned readings. The content of the course varies from year to year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation and secretion.

111-112. Physiological Laboratory. Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

115. Advanced Physiology. Three credit hours. First semester. Prerequisite, Physiology 101-102. Mr. Bleile.

Lectures, recitations and demonstrations on the physiology of circulation, digestion and respiration. May be profitably taken in conjunction with courses 109, 110.

118. **Advanced Physiology.** Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Durrant.

Lectures, recitations and demonstrations on the physiology of the nervous system, including its development, structural relations, and functioning. A study of the neuron, reflex paths, reflex actions and their modification, and of the special and general sensations.

FOR GRADUATES

201-202. **Advanced Physiology.**

203-204. **Research Work.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 206 Hayes Hall

PROFESSORS SPENCER AND COKER

101-102. **Government in the United States and Europe.** Three credit hours. The year.

A general survey of governmental institutions, national, state, and local, in the United States and the leading countries of Europe. This course is not open to freshmen. It is strongly recommended that it be preceded by a year's work in college history. It should precede all other courses in this department.

Political Science 101 is given also during the second semester.

*109-110. **State, County and Municipal Government in Ohio.** Two credit hours. The year. Prerequisite, Political Science 133-134 or 101-102.

This study covers the historical evolution and actual working of the state's governmental machinery and the particular functions which it performs. The course provides a groundwork for those preparing to teach civics or engage in public service, journalism or civic secretarial work.

*Not given in 1920-1921.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 100B Hayes Hall

PROFESSORS CLIFTON AND TWISS, ASSISTANT
PROFESSOR LANDSITTEL

101. Principles of Education. Three credit hours. First semester. Prerequisite, Psychology 101-102; History of Education 101-102. By special permission, the History of Education may be taken concurrently with the above course.

A review of educational theory and the principles underlying teaching.

104. Observation, Criticism, and Practice. Three credit hours. Either semester. Prerequisite, Principles and Practice of Education 101.

A study of the general and special method; observation and criticism of classroom work in high school. Practice in teaching, ten weeks.

107. Principles and Methods of High School Teaching. Three credit hours. Either semester. Open to senior students only.

Methods of teaching in high school including such problems as project teaching, the socialized recitation, and supervised study.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. Advanced Principles of Education. Three credit hours. The year. Prerequisite, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

PSYCHOLOGY

Office, 403 University Hall

PROFESSORS ARPS, PINTNER AND WEISS, ASSISTANT PROFESSORS
BRIDGES AND CRANE, MR. CULLER, MISS COY, MISS ROGERS,
MR. BURTT, MISS HATCH, AND DEPARTMENT
ASSISTANTS

101-102. Elementary Psychology. Introductory course. Three credit hours. The year. All instructors.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

A limited number of beginning students in psychology may take 103-104 as equivalent to 101-102.

103-104. Elementary Psychology. Three credit hours. The year. Two lectures and one laboratory period each week. Mr. Weiss.

This course meets the same requirements as a prerequisite as Psychology 101-102. Designed for students who wish to perform some of the simpler psychological experiments in their elementary course.

The number of students admitted to this course is limited to forty.

107-108. Educational Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Pinter, Miss Coy.

Psychology 107 is given also in the second semester.

Psychology 108 is given also in the first semester.

111. Experimental Psychology: Introduction. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 101-102. Mr. Weiss.

A systematic training course in the psychological methods as applied to the sense fields. Topics: vision, audition, the cutaneous, olfactory, gustatory, kinesthetic and organic senses.

112. Experimental Psychology: Advanced. Three credit hours. Second semester. One lecture and four laboratory hours each week. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A systematic training course in the psychological methods as applied to the more complex processes. Topics: perception, memory, attention, illusions, association and reaction time.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Crane.

This course is adapted to meet the needs of medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: nervous elements and their functions; end organs and their functions; cerebral func-

tions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

127. Industrial Psychology. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Lectures, recitations, reports. Mr. Bridges.

The application of psychology to the following problems: vocational guidance, selection of industrial workers, industrial learning and training, the adaptation of technical to mental conditions, industrial monotony, fatigue, rest, and the length of the working day.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

114. Mental and Social Measurements. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Not open to freshmen and sophomores. Mr. Burt.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education and the social sciences. Topics: standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

115-116. Genetic Psychology and Child Study. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to freshmen and sophomores.

Psychology 115 treats of the development of mind together with the laws and principles which govern this development in the child. Psychology 116 treats of the various problems of child study and the child mind which concern the home, school and society.

118. Perception and Behavior. Two credit hours. First semester. This course alternates biennially with Psychology 153. Prerequisite, Psychology 104 or 111. Not open to freshmen and sophomores. Mr. Weiss.

A consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on the original nature of man, the function of the nervous system, and the interaction among individuals.

119. Animal Psychology. Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Burt.

A survey of animal mind and behavior from one-celled organisms to the anthropoid apes. The topics studied will include sensations, instinct, learning and intelligence, with especial reference to methods as well as results.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feebleminded. The causes of the same. Lectures, recitations and clinics.

124. Psychopathology. Two credit hours. Second semester. Prerequisite, Psychology 121. Mr. Bridges.

The so-called borderland phenomena, sleep and dreams, psychopathology and everyday life, hypnosis and the hypnotic state, hysteria, psychasthenia, neurasthenia, and the constitutional psychopathic states. Considerable attention will be given to the various interpretations of these phenomena. Lectures, recitations and reports.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

126. Folk Psychology. Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

The psychic factors involved in various group activities which apply to the problems of education, religion and social aims.

128. **Psychology of Advertising.** Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and emotions to effective advertising. Lectures, reports and investigation of practical problems in the laboratory.

131. **Advertising Laboratory.** One or two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104, and 128 either taken previously or concurrently. Mr. Crane.

General and special problems illustrating the application of laboratory methods, and the treatment and use of experimental data in the field of advertising.

129. **Advanced Psychology.** Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

This course is intended for students who desire a more detailed knowledge of the normal mental processes than is possible in an introductory course. A course fundamental to all fields of psychology and philosophy and to allied fields which involve human behavior. This course is mainly a consideration of the cognitive processes.

133-134. **Mental Tests.** Three credit hours. The year. Prerequisite, Psychology 112 or 107-108 or 121-122. Mr. Pintner.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

138. **Psychology of Emotion and Volition.** Two credit hours. Second semester. Prerequisite, Psychology 129. Mr. Arps.

A study of the various theories of feeling and emotion; the relation of the affective processes to the life of cognition; theories of volition; determinism; sources of action; diseases of the will and their relation to social problems.

139-140. History of Psychology. Two credit hours. The year. Given biennially. Offered in 1920-1921. Prerequisite, Psychology 129 and 138 or the permission of the instructor. Mr. Burt.

The course aims to view modern psychological problems in the light of their historical antecedents. The development of various theories such as those of sensation, attention, space perception and emotion will be traced from earliest times to the present. As far as possible assignments will involve reference to original sources.

141-142. Minor Problems. Two to four credit hours. The year. Prerequisite, at least twelve hours in psychology.

Investigation of minor problems in the various fields of psychology.

147-148. The Psychological Clinic. One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pintner.

Practical work in the diagnosis of defective and exceptional children.

151-152. Criminal and Legal Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to freshmen and sophomores. Mr. Crane.

A critical presentation of the evolution of the present day psychological conception of crime, with a study of the neurological basis of, and the nature of the stimuli to, anti-social behavior. There will be both a critical and experimental study of the psychological principles applied to the problems of testimony, those underlying recently advocated reforms in legal procedure, and the technique and reliability of suggested psychological methods for the detection of criminals.

***153. Theoretical Psychology.** Two credit hours. First semester. Alternating biennially with Psychology 118. Prerequisite, at least two years in psychology. Mr. Weiss.

Lectures, and assigned readings from Poincaré, Pearson, Mach, Avenarius. The evolution of modern psychology as influenced by the development of the natural sciences with special

*Not given in 1920-1921.

emphasis on the nature of psychological problems, experiments and laws.

***155. The Treatment of Exceptional Children.** Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104, and permission of the instructor. Not open to freshmen and sophomores. To be given biennially.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children, both superior and inferior types. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual defects, moral eccentricities. Lectures, reports and practical work with children in the public schools.

FOR GRADUATES

201-202. Major Research.

203-204. Seminary in Psychology.

205-206. Contemporary Psychological Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC HEALTH AND SANITATION

PROFESSOR HAYHURST

113. Personal Hygiene. Two credit hours. First semester. Two lectures or recitations each week. Mr. Hayhurst.

Component systems of the human body are considered from the point of view of their functions, toleration and adaptation limits, habit effects, normal and abnormal states with signs and indications thereof, common diseases with their prophylaxis and the principles of emergency treatments.

This course aims, in a non-technical manner, to point out the principles for maintaining personal health and efficiency.

121. Public Health Problems. Two credit hours. First semester. Two lectures or recitations each week. Mr. Hayhurst.

This course includes an elementary consideration of the various public health problems which present themselves. Consideration is given the question of the prevention of unnecessary

*Not given in 1920-1921.

infant mortality, the physical supervision of school children, the provision and the protection of the public water and food supplies, the proper elimination of wastes, the sociological aspects of public health work, including especially the question of the elimination of tuberculosis. Limited instruction is given on the matter of quarantine regulation, disinfection, and in the control of communicable diseases.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 104 Hayes Hall

PROFESSORS BOWEN AND INGRAHAM, ASSISTANT PROFESSORS HAMILTON, CHAPIN, HACKER, GUTIERREZ, WILLIAMS, HAVENS, AND ROCKWOOD, MR. BERTHEMY, MR. TAILLIART, MISS HIER, MR. HADDOX, MR. MASSO, MR. SLOAN, MR. SMITH, MISS BROWN, MR. MOORE, MRS. PEARSON, MISS SCHONS, AND DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French except French 106. French 111, 112, and 119-120 must be preceded by French 131-132, 109, and 110, or an equivalent.

The undergraduate courses offered in French, and to some extent in Spanish, beginning with third-year collegiate work, fall into two general groups: (1) literary, (2) linguistic and practical; so that students may emphasize one or both of these lines of study. For students who enter with two years of high school French and who desire to major in French the following outline course is recommended:

First year: French 103-104.

Second year: French 131-132 and 109-110.

Third year: French 125-126, 111-112 and 113-114 or 115-116.

Fourth year: French 119-120, and 122, and 123-124.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar: Fraser and Squair's, or equivalent. Reader: Aldrich and Foster's, or Bowen's First Scientific. Historical and narrative prose; one or more prose comedies. All instructors.

Stress is laid first upon the acquisition of a correct pronunciation, after which the energy of the student is directed

toward the attainment of (1) an accurate reading knowledge of the language, and (2) facility in speaking and understanding it. Grammar and composition are made to contribute to these ends.

French 101 is given also during the second semester, and French 102 is given also during the first semester.

103-104. Modern French Literature. Four credit hours. The year. Prerequisite, French 101-102 or an equivalent. All instructors.

The work of the year deals with the following subjects: (1) Contes; (2) The novel (Balzac or Hugo); (3) Lyric poetry; (4) Romantic drama (Hugo). Prose composition with practice in speaking. Systematic attention given to syntax and idiom. Lectures supplement the work. Private reading required.

French 103 is given also during the second semester.

106. Science Reading. Four credit hours. Second semester. Prerequisite, French 103. Mr. Berthemy.

A course of rapid reading introductory to the vocabulary of scientific literature.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major in French are urged to elect the following courses outside the department: European History 121-122 and Greek 141.

109. Seventeenth Century Drama: Molière and Corneille. Three credit hours. First semester. Mr. Bowen, Mr. Rockwood.

Lectures on the growth of French comedy and tragedy. Critical study of representative plays of Molière, Regnard, and Corneille. Collateral reading. Assigned topics and reports.

110. Seventeenth Century Tragedy and Prose. Three credit hours. Second semester. Mr. Bowen, Mr. Rockwood.

Representative dramas of Racine; Hachette's *Théâtre Choisi* de Racine. Study of Descartes, Pascal, La Bruyère and others; Warren's *Selections*. Lectures, with collateral reading and reports.

111. Eighteenth Century Drama. Two credit hours. First semester. Prerequisite, French 109 and 110. Mr. Hacker.

Lectures on French comedy after Molière, with work centering on Marivaux and Beaumarchais. Study of the drama of Voltaire. Collateral reading and reports.

112. Nineteenth Century Drama. Two credit hours. Second semester. Prerequisite, French 109 and 110. Mr. Hacker.

Tendencies of French drama during the nineteenth century, with special reference to Scribe, Augier, Dumas fils, and Sardou. Lectures, with collateral reading and reports.

113. Recent French Prose. Two credit hours. First semester. Given biennially, alternating with French 115. Mr. Williams.

Rapid reading with lectures. Selections from the works of such writers as Bazin, Bourget, Loti, and Bordeaux.

***114. Practice in Speaking and Writing French.** Two credit hours. Second semester. Given biennially, alternating with French 116. Mr. Berthemy.

***115. Eighteenth Century Prose.** Two credit hours. First semester. Given biennially, alternating with French 113. Mr. Bowen.

Selections from Voltaire (ed. Cohn and Woodward), Rousseau and others.

***116. Advanced Conversational Practice.** Two credit hours. Second semester. Given biennially, alternating with French 114. Mr. Berthemy.

119-120. Old and Middle French. Two credit hours. The year. Mr. Hacker.

Studies in Old French (with emphasis on la Chanson de Roland) and in the language and writers of the sixteenth century. Special consideration of Montaigne.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Bowen.

Historical and critical survey of the methods of teaching French. The teacher's equipment. Class room aids. Special

*Not given in 1920-1921.

problems and difficulties in the teaching of French. Lectures; discussions; practice in conducting recitations.

123. French Phonetics. Two credit hours. First semester. Prerequisite, three years of collegiate French or the equivalent. Mr. Hacker.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

124. Review of French Syntax. Two credit hours. Second semester. Prerequisite, three years of collegiate French or the equivalent. Mr. Hacker.

A careful elucidation of French grammar, with composition to illustrate. Designed for advanced students who expect to teach French.

125-126. History of French Literature. Two credit hours. The year. Mr. Rockwood.

This course is conducted in French. A survey of French literature. Assignment of special topics and authors to be reported on in French.

131-132. Advanced French Composition and Conversation. Two credit hours. The year. Mr. Tailliant or Mr. Berthemy.

This course is conducted in French, original essays and reports in French. Dictation. The geography and history of France will be given special attention.

ITALIAN

101-102. Elementary Italian. Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Mr. Williams.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Italian Novel. Two credit hours. First semester. Prerequisite, Italian 101-102. Mr. Williams.

Manzoni (*I Promessi Sposi*, and others). Lectures.

104. Dante. Two credit hours. Second semester. Prerequisite, Italian 103. Mr. Williams.

Selections from the Inferno and Paradiso. Lectures.

SPANISH

101-102. Elementary Spanish. Four credit hours. The year. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Elementary reading as a basis for oral and written practice.

Spanish 101 is given also during the second semester.

103-104. Intermediate Spanish. Four credit hours. The year. Prerequisite, Spanish 101-102 or an equivalent. Mr. Chapin, Mr. Gutierrez.

A more comprehensive survey of the forms and syntax with more advanced reading as a basis for practice in speaking and writing.

110. Commercial Reading and Correspondence. Four credit hours. Second semester. Prerequisite, Spanish 103. Mr. Chapin.

A course designed to familiarize students with the vocabulary of business and with the forms of Spanish commercial paper and correspondence.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major in Spanish are urged to elect the following courses outside of the department: American History 126, Greek 141, and German 175.

105-106. Advanced Spanish. Three credit hours. The year. Prerequisite, Spanish 103 and 104 or 110. Mr. Ingraham.

A study of Spanish syntax with illustrative exercises. Rapid reading of modern novels and plays.

107-108. Classical Spanish Literature. Two credit hours. The year. Prerequisite, Spanish 105-106. Mr. Ingraham.

Rapid reading of ballads and classical novels and dramas. Lectures on the history of Spanish literature.

111. **The Teaching of Spanish.** Two credit hours. First semester. Prerequisite, four semesters of collegiate Spanish or its equivalent. Open to seniors and graduates. Mr. Ingraham.

Methods of teaching modern languages. Recitation from and discussion of a recent book on the subject. Reviews and discussion of recent text-books. The teacher's equipment. Classroom aids. Lectures; discussions; practice in conducting recitations.

113-114. **Advanced Composition and Conversation.** Three credit hours. The year. Prerequisite, four semesters of college Spanish or an equivalent. Mr. Gutierrez.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be in large part the geography and history of Spain and Spanish-America.

ROMANCE LANGUAGES

FOR GRADUATES

*201-202. Introduction to Romance Philology.

203-204. Old Provencal.

205-206. History of the Literary Movements in France in the First Half of the Nineteenth Century.

*207-208. Research in French Literature.

209-210. Research in Spanish Literature.

211-212. Old Spanish.

213. Nineteenth Century French Lyric.

*215. Seminary in Molière.

*216. Seminary in Molière and his Successors.

217-218. Seminary in French Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1920-1921.

SCHOOL ADMINISTRATION

Office, 100A Hayes Hall

PROFESSORS BROWN AND McCRACKEN

101. Public Education in the United States. Three credit hours. Either semester. Three lectures each week and assigned readings. Required of all students in the College of Education, except teachers in service, who may take 105. Elective to others. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

An introductory survey of public education in the United States, as the expression and promoter of democracy. School laws, regulations and decisions of Ohio. Credit for both 101 and 105 will not be given.

105. Public Education in the United States. Two credit hours. Either semester. Two lectures each week, and assigned readings. Open to teachers, supervisors, principals, and superintendents in active service, subject to the approval of the instructor in charge. Required of all such enrolled in the College of Education who do not take 101. Elective to all such if enrolled in other colleges. Prerequisite, junior standing. Mr. Brown, Mr. McCracken.

Credit for both 101 and 105 will not be given.

(This course is an abridgment of School Administration 101 and will be offered on Saturdays or evenings.)

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Administration of Rural Education. Two credit hours. First semester. Two lectures each week, assigned readings, investigations and reports. Elective. Prerequisite, 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Problems affecting the organization, administration, supervision, and inspection of rural schools.

104. School Hygiene. Two credit hours. Second semester. Two lectures each week, assigned readings, investigations and reports. Elective. Prerequisite, 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

A study of school hygiene, including such topics as communicable diseases, hygiene of vision, of hearing, and of teeth; nutrition, hygiene of instruction, health of the teacher, fatigue, and equipment of buildings and grounds.

111. **The Administration of Secondary Schools.** Three credit hours. First semester. Three lectures each week, assigned readings and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Historical forerunners of the high school, types of high schools, aims of secondary education, relation to higher and elementary education, high schools of the North Central States, curricula and time schedules, college entrance requirements, buildings, equipment, texts, supplies, support, and cost. Credit will not be given for both 111 and 117.

112. **The Administration of Secondary Schools.** Three credit hours. Second semester. Three lectures each week, assigned readings and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Retardation, elimination, overage, delinquency, student activities, grading, records, reports, hygiene, sanitation, health; preparation, selection, assignment, tenure, and pay of teachers.

Credit will not be given for both 112 and 118.

113. **The Administration of Elementary Schools.** Three credit hours. First semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Aims, organization, and control, types of schools, curricula, schedules, texts, supplies, relation to secondary and vocational education, buildings, equipment, grounds, support and cost.

Credit will not be given for both 113 and 119.

114. **The Administration of Elementary Schools.** Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, junior standing, and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Retardation and elimination, individual differences, grading and promotions, efficiency tests and records, delinquents and defectives, student activities. Teacher: training, selection, promotion, tenure, salaries, pension, organizations. Credit will not be given for both 114 and 120.

115. Educational Statistics. Two credit hours. First semester. Two lectures each week, assigned readings and problems. Elective. Open to superintendents, principals, and graduates of experience, by permission of the instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. City School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit one year of experience. Mr. Brown.

A comparative and critical study of several types of existing city school systems. A thesis on some problem required of each student.

117. Problems of High School Administration. Two credit hours. First semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. Brown.

Credit for both 111 and 117 will not be given.

(This course is an abridgment of School Administration 111 and will be offered Saturdays and evenings.)

118. Problems of High School Administration. Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. Brown.

Credit for both 112 and 118 will not be given.

(This course is an abridgment of School Administration 112 and will be offered Saturdays or evenings.)

***119. Problems of Elementary School Administration.** Two credit hours. First semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Credit for both 113 and 119 will not be given.

(This course is an abridgment of School Administration 113 and will be offered Saturdays or evenings.)

***120. Problems of Elementary School Administration.** Two credit hours. Second semester. Two lectures each week, assigned readings and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Credit for both 114 and 120 will not be given.

(This course is an abridgment of School Administration 114 and will be offered Saturdays or evenings.)

122. State School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to seniors and graduates. Prerequisite, six hours of school administration, and for graduate credit one year of experience. Mr. Brown.

A comparative study of the school systems of the various American states including such topics as federal and state policies, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, the state and non-state education.

133-134. The Administration of Higher Education. Three credit hours. The year. Three lectures each week, assigned readings, investigations and reports. Elective. Open to seniors and graduates, by permission of the instructor in charge. Prerequisite, eight hours of school administration and two years of experience. Mr. Brown.

A comparative study of the various types of control, organization, and administrative policies as illustrated in selected col-

*Not given in 1920-1921.

leges, universities, technical schools, junior colleges, normal schools and normal colleges.

FOR GRADUATES

201. Seminary in School Administration.

202. Seminary in School Administration.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SHOPWORK

Office, 125 Shops Building

PROFESSOR W. A. KNIGHT, MR. BEEM, MR. FOUST, MR. DENMAN
MR. BRECKUR, MR. P. L. WRIGHT, MR. H. R. WRIGHT,
MR. SENN, AND DEPARTMENT ASSISTANTS

105. Foundry Work. Two credit hours. Either semester. Industrial Education, first year. Mr. Breckur.

115. Forging. Two credit hours. Either semester. Industrial Education, third year. Mr. Foust, Mr. Wright.

118. Advanced Forging. Two credit hours. Second semester. Prerequisite, Shopwork 115. Industrial Education, fourth year. Mr. Foust, Mr. Wright.

119. Machine Work. Three credit hours. Either semester. Industrial Education, third year. Mr. Knight, Mr. H. R. Wright.

121. Advanced Machine Work. Three credit hours. Either semester. Prerequisite, Shopwork 119. Optional, Industrial Education, fourth year. Mr. Knight, Mr. H. R. Wright.

123. Advanced Machine Work. Two credit hours. First semester. Prerequisite, Shopwork 121. Elective. Mr. Knight, Mr. H. R. Wright.

125. Construction Work. Two credit hours. Either semester. Prerequisite, Shopwork 121. Elective. Mr. Knight, Mr. H. R. Wright.

SOCIOLOGY

(See Economics and Sociology)

SPANISH

(See Romance Languages and Literatures)

SURVEY OF EDUCATION

THE DEAN OF THE COLLEGE OF EDUCATION

Introductory Survey of Education. One credit hour. **First** semester. Required of all students in the College of Education in either the first or the second year. The Dean.

An introductory survey of education as a separate field to acquaint the student with past and present trends in education, with educational experiments and literature, and with the opportunities and difficulties in teaching as a profession.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN, OSBORN, AND METCALF, ASSOCIATE PROFESSOR HINE, ASSISTANT PROFESSORS BARROWS AND KRECKER, MR. KOSTIR, MR. KENNEDY, MR. WICKLIFF, AND DEPARTMENT ASSISTANTS

For those students desiring to receive a recommendation for the teaching of zoology in secondary schools the department suggests that in addition to the introductory course, Zoology 101-102, one or more of the following courses be taken: 107-108, Economic Entomology; 121-122, Invertebrate Morphology; 131-132, Evolution; 159-160, Animal Ecology.

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Lectures and laboratory. Mr. Osburn, Mr. Barrows, Mr. Kreckler, Mr. Kostir, Mr. Wickliff, and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology, and to serve as a foundation for more advanced courses.

Zoology 101 is given also during the second semester.

115. General Principles of Heredity. Three credit hours. Either semester. Three lectures each week. Prerequisite, Zoology 101-102 or Botany 101-102 or equivalent. Mr. Barrows.

A study of heredity in animals and plants to serve as an introduction to heredity as a basis for advanced work in plant and animal breeding and as an aid in the analysis of biological and sociological problems into which the question of heredity enters. The subject will be presented in lectures, illustrated with lantern slides and actual specimens. Exercises in the form of problems will be assigned. The different types of heredity studied will be chosen from the animal and plant material which best illustrates the subject. Hereditary characters found in man will be used to a large extent. The course will be made as simple and practical as the subject will permit. Present day theories and technical applications will be left for discussion in the more advanced courses to which they properly belong.

121-122. Advanced Zoology of Invertebrates. Three credit hours. The year. One lecture and two laboratory periods each week. Prerequisite, Zoology 101-102 or equivalent. Mr. Kostir.

A study of the structure, life histories, habits and relationships of invertebrate animals, together with the consideration of important biological principles. Lectures, laboratory exercises, and occasional field trips.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osburn.

The facts and theories of the origin, development, and distribution of animal life. The general order of treatment is: historical aspects, evidences, factors and modern theories. The relation of evolutionary doctrine to practical problems is emphasized.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year in biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year in biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

159. Animal Ecology. Three credit hours. First semester. One lecture and four hours in the field or laboratory each week. Prerequisites, Zoology 101-102 and one additional year of biological science. Mr. Krecker.

An introduction to the study of animals in their natural surroundings, which will include ponds, streams, fields and woodlands, animal associations and the various factors which affect animals in relation to their environment.

Students who desire to continue the subject in the second half year can take up some particular phase of the work and should register for Zoology 142 in the second semester.

This course is recommended to students who expect to teach biology.

FOR GRADUATES

201-202. Seminary in Zoology.

223-224. Invertebrate Embryology.

241-242. Research Work.

247-248. Invertebrate Zoology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. Economic Entomology. Three credit hours. The year. Prerequisite, Zoology 101-102 or equivalent. An elementary course. Mr. Metcalf, Mr. Kennedy, and assistants.

The structure, physiology, development and habits of insects, as a basis for insect control and for special study in entomology; followed by a general systematic survey of insects, mites and ticks with special attention to destructive and bene-

ficial species and the control of those injurious to farm, orchard, garden, forest, household, mill and storehouse, and the health of man and domestic animals.

Lectures, quizzes, problems and laboratory work on general anatomy, life-stages, field observations of habits and damage and the preparation and application of remedial measures. Students are required to prepare a collection. Those desiring to collect specimens in advance should get printed instructions from the department.

FOR GRADUATES

201-202. Seminary in Entomology.

241-242. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

TIME SCHEDULE

COLLEGES OF ARTS AND EDUCATION

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Departments of Instruction without first consulting the secretary of their college.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours per semester of the course.

KEY TO ABBREVIATIONS

- Bi.—Biological Building
- B. Z.—Botany and Zoology Building
- Br.—Brown Hall
- Ch.—Chemistry Hall
- Ha.—Hayes Hall
- H. E.—Home Economics Building
- H. F.—Horticulture and Forestry Building
- L.—Library
- Lo.—Lord Hall
- Obs.—Observatory
- O.—Orton Hall
- P.—Page Hall
- Pav.—Judging Pavilion
- Ph.—Physics Building
- R. L.—Robinson Laboratory
- S.—Shops Building
- T.—Townshend Hall
- U.—University Hall
- V. C.—Veterinary Clinic
- V. L.—Veterinary Laboratory

L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

AGRICULTURAL CHEMISTRY AND SOILS

AGRICULTURAL CHEMISTRY

Course No.	Hours	Time	Room	Instructor
—123	4	L., Tu., at 9	T. 205	Ly. an
		Tu., at 2	T. 205	
		Q., Th., at 9	T. 205	
		Th., at 2	T. 205	
		Lab., M., W., 8 to 11	T. 210	
		M., W., 1 to 4	T. 210	

AMERICAN HISTORY

101—102	3	M., W., F., at 8	U. 205	All Instruc- tors
		M., W., F., at 8	L. 107	
		Tu., Th., S., at 8	U. 209	
		M., W., F., at 9	U. 205	
		M., W., F., at 9	L. 107	
		Tu., Th., S., at 9	U. 205	
		M., W., F., at 10	U. 205	
		M., W., F., at 10	L. 107	
		Tu., Th., S., at 10	U. 209	
		M., W., F., at 1	U. 205	
		M., W., F., at 1	U. 209	
		M., W., F., at 2	U. 205	
		M., W., F., at 2	U. 209	
		M., W., F., at 3	U. 205	
		M., W., F., at 3	U. 209	
102—101	3	M., W., F., at 1	U. 202	Wood Boucher Boucher Hockett Wittke Hockett Knight Knight Hockett Wittke Knight Knight, Hock- ett, Boucher
		Tu., Th., S., at 10	L. 107	
103—104	3	M., W., F., at 3	U. 202	
109—110	2	Tu., Th., at 8	U. 205	
111—112	3	M., W., F., at 10	U. 209	
115—116	8	M., W., F., at 2	U. 202	
—118	2	Tu., Th., at 9	U. 209	
119—	2	Tu., Th., at 3	U. 209	
121—	2	Tu., Th., at 2	U. 209	
123—124	3	M., W., F., at 9	U. 209	
—130	2	Tu., Th., at 3	U. 205	
133—	2	Tu., Th., at 9	U. 209	
203—204	2	Tu., Th., at 3	L. 303	
205—206	2	M., 3 to 5	L. 303	

ANATOMY

101—102	3 or 5	L., M., at 1	Bio. 102	Baker
		Lab., M., Tu., W., 1 to 4		
103—104	3 to 5	L., W., at 1	Bio. 107	Landacre
		Lab., W., Th., F., 1 to 4		

ANATOMY—Continued

Course No.	Hours	Time	Room	Instructor
105—106	3 to 5	To be arranged	Bio. 102	Baker
107—108	3 to 5	L., Tu., at 4 Lab., M., Tu., 1 to 4	Bio. 102	Knouff
109—110	3 to 5	To be arranged	Bio. 106	Landacre
111—112	1	M., at 4	Bio. 101	Landacre
113—114	3 to 5	To be arranged	Bio. 107	Landacre
—116	3	To be arranged		
—118	3 to 5	L., Tu., at 8	Bio. 100	Landacre
(pre-med)		Th., at 1	Bio. 102	Baker, Knouff
		Lab., Tu., 9 to 11		
		Th., 8 to 11		
		Tu., 1 to 4		
		Th., 2 to 4		
		For 5 hrs. credit F., 1 to 4 additional		
119—120	3 to 5	To be arranged		Baker
121—	6	Tu., W., Th., F., 1 to 5	Park St. 410	Buck
—122	4	Tu., W., Th., 1 to 5	Park St. 410	Buck
125—	4	W., F., 1 to 5	Park St. 409	Smith
—126	4	W., F., 1 to 5	Park St. 409	Smith
127—	3 to 5	L., W., F., at 8 Lab., W., 9 to 12	Park St. 410	Buck
—131	2	To be arranged	Park St. 410	Buck
133—	6	L., M., W., F., at 8 M., at 1	Park St. 400	Landacre, Baker,
		Lab., M., W., F., 9 to 12	Park St. 413	Knouff
—134	4	To be arranged		Landacre, Baker
—136	4	L., M., W., F., at 8 M., at 1	Park St. 400	Landacre
		Lab., M., W., F., 9 to 12	Park St. 408	Buck
		F., 1 to 5	Park St. 413	
139—	3	L., W., F., at 8	Park St. 400	
		Lab., F., 9 to 12	Park St. 413	
—140	2	L., Th., at 8	Park St.	Baker
		Lab., F., 9 to 12		
—142	4	L., M., F., at 8	Bio. 100	Knouff
		Lab., W., 1 to 5		
143—	5	L., M., W., F., at 1	Bio. 100	Knouff
		Lab., M., W., F., 2 to 4		
145—	4	To be arranged		Landacre
149—150	3 to 5	To be arranged	Park St. 413	Knouff
—152	3	To be arranged	Park St. 410	Landacre, Buck
—154	1	Tu., 8 to 10	Park St.	Baker
201—202	3 to 5	To be arranged		Landacre
203—204	5 to 10	To be arranged		

ART

Course No.	Hours	Time	Room	Instructor
117—	3	M., W., F., at 8	Ha. 201	Robinson
119—119	1	M., at 4	Ph. 200	Kelley
121—	2	M., W., 1 to 3	Ha. 201	Knauber
—121	2	M., W., 1 to 3	Ha. 201	Knauber
131—	2	M., W., 8 to 10	Ha. 303	All Instructors
		M., W., 1 to 3	Ha. 303	
		Tu., Th., 8 to 10	Ha. 303	
		Tu., Th., 10 to 12	Ha. 303	
		Tu., Th., 1 to 3	Ha. 303	
		F., S., 8 to 10	Ha. 303	
—131	2	M., W., 8 to 10	Ha. 303	
		Tu., Th., 1 to 3	Ha. 303	
132—	2	M., W., 1 to 3	Ha. 300	All Instructors
		Tu., Th., 1 to 3	Ha. 303	
—132	2	Tu., Th., 8 to 10	Ha. 303	All Instructors
		Tu., Th., 10 to 12	Ha. 303	
		M., W., 9 to 11	Ha. 303	
		M., W., 1 to 3	Ha. 303	
133—	2	M., W., 9 to 11	Ha. 303	Norris
		Tu., Th., 9 to 11	Ha. 303	
—133	2	Tu., Th., 2 to 4	Ha. 303	Robinson
134—134	3	Tu., Th., 8 to 11	Ha. 303	Kelley
136—	2	M., W., 8 to 10	Ha. 303	Robinson
—136	2	M., W., 9 to 11	Ha. 303	Robinson
—137	3	Tu., Th., 8 to 11	Ha. 303	Robinson
138—	3	M., W., F., 1 to 3	Ha. 303	
—139	3	M., W., F., 1 to 3	Ha. 303	
141—	2	M., W., at 8	Ha. 204	All Instructors
		Tu., Th., at 9	Ha. 204	
—141	2	W., F., at 8	Ha. 204	All Instructors
		Tu., Th., at 10	Ha. 204	
		M., W., at 1	Ha. 204	
		Tu., Th., at 1	Ha. 204	
		Tu., Th., at 3	Ha. 204	
142—	3	Tu., Th., 1 to 3	Ha. 201	
—143	3	M., W., 1 to 3	Ha. 201	
—144	3	M., W., 2 to 4	Ha. 303	Norris
—145	3	To be arranged		
147—148	2	Tu., Th., 1 to 3	Ha. 303	Norris
151—152	3	M., W., F., at 10	Ha. 204	Kelley, Webber
153—	3	M., W., F., at 9	Ha. 204	Webber
—155	2	Tu., Th., at 2	Ha. 204	Webber
—158	5	To be arranged		Kelley
160—	3	M., W., F., at 3	Ha. 204	Kelley
—162	2	Tu., Th., 9 to 11	Ha. 300	
163—164	2	Tu., Th., 8 to 10	Ha. 303	

ASTRONOMY

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 8	Obs.	Lord, Manson
		M., W., F., at 1	Obs.	
104—	3	M., W., F., 9 to 11	Obs.	Lord, Manson
		M., W., F., 2 to 4	Obs.	
—105	3	Tu., 8 to 11; W., F., at 3	Obs.	Lord, Manson
		Th., 1 to 4; Tu., F., at 11	Obs.	
107—108	3 to 5	To be arranged	Obs.	Lord, Manson
109—110	4	To be arranged	Obs.	Lord
111—112	3 to 5	To be arranged	Obs.	Manson

BACTERIOLOGY

—102	2	L., Th., at 8	V. L. 101	Masters
		Lab., Th., 1 to 4	V. L. 201	Masters,
				Ockerblad
107—	4 or 5	L., M., W., at 9	V. L. 102	Morrey
		M., W., at 2	V. L. 102	Morrey
		Tu., Th., at 9	V. L. 102	Morrey
		Lab., M., W., 8 to 11	V. L. 201	Masters
			V. L. 205	Ockerblad
		M., W., 1 to 4	V. L. 201	Masters
			V. L. 205	Ockerblad
		Tu., Th., 8 to 11	V. L. 201	Masters
			V. L. 205	Ockerblad
		Tu., Th., 1 to 4	V. L. 201	Masters
			V. L. 205	Ockerblad
		Tu., Th., 8 to 11	V. L. 8	Watson
		M., S., 8 to 11	V. L. 8	Watson
—108	2 to 5	L., M., W., at 9	V. L. 102	Morrey
		M., W., at 2	V. L. 102	Morrey
		Lab., M., W., F., 8 to 11	V. L. 205	Masters,
				Ockerblad
		M., W., 1 to 4	V. L. 205	Masters,
				Ockerblad
—110	2 to 5	L., Tu., Th., at 11	V. L. 102	Morrey
		Lab., Tu., Th., 1 to 4	V. L. 205	Morrey
—112	2 to 5	L., Tu., Th., at 10	V. L. 102	Morrey
		Lab., W., F., 1 to 4	V. L. 201	Morrey
—114	2 to 5	L., Tu., Th., at 9	V. L. 102	Morrey
		Lab., M., W., 1 to 4	V. L. 201	Morrey
117—118	2 to 5	L., W., F., at 1	V. L. 101	Starin
		(Either semester)		
		Lab., M., S., 8 to 11	V. L. 8	Starin, Watson
		(Second semester only)		
119—120	2	L., M., F., at 11	V. L. 102	Starin
121—122	2 to 5	Tu., Th., 8 to 12	V. L. 8	Morrey
123—124	2 to 5	Tu., Th., 8 to 12	V. L. 8	Morrey

BACTERIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
125—126	2 to 5	Tu., Th., 8 to 12	V. L. 8	Starin, Morrey
131—132	4	L., W., F., at 8	V. L. 101	Starin
		Lab., W., F., 9 to 12	V. L. 8	Starin, Watson
141—141	7	L., M., W., F., at 1	V. L. 102	Morrey
		Lab., M., W., F., 2 to 5 and		
		Tu., Th., 1 to 5	V. L. 8	Starin, Watson
—150	4	L., M., W., at 10	V. L. 101	Morrey
		Lab., Tu., F., 1 to 4	V. L. 201	Masters,
				Ockerblad
		Tu., F., 1 to 4	V. L. 205	Masters,
				Ockerblad
		Tu., Th., 9 to 12	V. L. 205	Masters,
				Ockerblad
201—202		To be arranged		Morrey, Starin
203—204		To be arranged		Morrey, Starin

For Short Courses Only

51—	4	To be arranged
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BIBLIOGRAPHY

101—102	1	Tu., at 3	L. 107	Jones
103—	½	Th., at 1	L. 107	Reeder
		Th., at 3	L. 107	Reeder
		M., at 11	L. 107	Reeder
		F., at 11	L. 107	Reeder
105—105	2	M., W., at 4	L. 107	Reeder

BOTANY

101—102	8	L., Tu., Th., at 8	B. Z. 208, 110	All Instructors
		Tu., Th., at 9	B. Z. 208, 110	
		Tu., Th., at 10	B. Z. 208, 110	
		Tu., Th., at 1	B. Z. 110, 208	
		Tu., Th., at 2	B. Z. 110, 208	
		Tu., Th., at 3	B. Z. 110, 208	
		Lab., M., 10 to 12	B. Z. 108	
		M., 1 to 3	B. Z. 108	
		Tu., 8 to 10	B. Z. 108	
		Tu., 1 to 3	B. Z. 108	
		W., 8 to 10	B. Z. 108	
		W., 1 to 3	B. Z. 108	
		Th., 8 to 10	B. Z. 108	
		Th., 1 to 3	B. Z. 108	
		F., 8 to 10	B. Z. 108	
		F., 1 to 3	B. Z. 108	

BOTANY—Continued

Course No.	Hours	Time	Room	Instructor
—101	3	L., M., W., at 2 Lab., M., 8 to 10	B. Z. 110 B. Z. 110	
—116	3	L., W., at 10 Lab., M., F., 10 to 12	B. Z. 208 B. Z. 206	Stover
117—118	3	L., M., at 10 Lab., W., 1 to 5	B. Z. 110 B. Z. 66	Transeau
119—120	3	S. and M. arranged	B. Z. 210	Griggs
121—	3	L., W., at 1 Lab., W., 2 to 4	B. Z. 110 B. Z. 62	Schaffner
123—124	4	L., M., W., at 10 Lab. to be arranged	B. Z. 209 B. Z.	Griggs
125—126	4	L., M., W., at 9 Lab., Tu., Th., 1 to 3 Tu., Th., 3 to 5	B. Z. 110 B. Z. 112 B. Z. 112	Transeau
127—128	4	L., Tu., Th., at 11 Lab., M., F., 1 to 3	B. Z. 110 B. Z. 210	Stover
129—130	3 to 5	M., 1 to 4; other hours arranged	B. Z. 60	Schaffner
133—134	3 to 5	To be arranged		All Instruc- tor
139—140	3	To be arranged	B. Z. 210	Stover
—150	3	Tu., at 9; W., 9 to 11	B. Z. 112	Transeau
151—152	3	M., at 11; M., F., 1 to 3	B. Z. 110	Sampson
155—	3	To be arranged		Waller
201—202	3 to 10	To be arranged	B. Z. 104	Schaffner, Griggs
203—204	4 to 10	To be arranged	B. Z. 104	Schaffner, Griggs
205—206	4 to 10	To be arranged	B. Z. 112	Transeau
207—208	3 to 10	To be arranged	B. Z. 210	Griggs, Stover

For Short Courses Only

91—	4	To be arranged	B. Z.
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CHEMISTRY

105—106	4	L., M., at 8 W., at 9 M., at 1 W., at 2 Q., W., at 8 F., at 8 F., at 9 F., at 11 W., at 1 F., at 1 F., at 2	Ch. 200 Ch. 200 Ch. 200 Ch. 200 Ch. 302 Ch. 302 Ch. 101, 302 Ch. 302 Ch. 101, 302 Ch. 302 Ch. 101, 302	Evans and department assistants
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CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
		S., at 9	Ch. 101	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		
109—110	4	L., F., at 8	Ch. 200	Evans and department assistants
		F., at 10	Ch. 200	
		F., at 1	Ch. 200	
		F., at 3	Ch. 200	
		Q., M., at 10	Ch. 101	
		M., at 3	Ch. 101, 302	
		W., at 8	Ch. 207	
		W., at 10	Ch. 101, 207	
		W., at 3	Ch. 101, 302	
		S., at 8	Ch. 207	
		S., at 9	Ch. 207	
		S., at 10	Ch. 207	
		S., at 11	Ch. 207	
		Lab., M., W., 8 to 11		
		Tu., Th., 8 to 11		
		F., S., 8 to 11		
		M., W., 1 to 4		
		Tu., Th., 1 to 4		
113—114	2	Tu., Th., at 1	Ch. 200	Henderson
119—120	4	L., F., at 10	Ch. 207	Foulk
		M., at 3	Ch. 200	Foulk
		Lab. open mornings and afternoons		
121—	4	L., M., at 3	Ch. 200	Foulk
		Lab., Tu., W., 1 to 4		
—124	1	F., at 1	Ch. 207, 101	Foulk
127—	4	M., Tu., Th., F., at 11	Ch. 200	Boord
—132	2	Tu., at 11; F., at 4	Ch. 101	
—136	2	Tu., Th., at 11	Ch. 207	Foulk
—140	4	Thesis—To be arranged		
150—	3	Tu., Th., at 9; S., at 11	Ch. 200	Evans
	5	Tu., Th., at 9; S., at 11	Ch. 200	
		Lab., Tu., Th., 1 to 4		
		M., W., 1 to 4		
151—152	2	Tu., Th., at 8	Ch. 200	McPherson
153—154	2 or 3	Lect., Th. at 1	Ch. 207	McPherson,
		Lab. open afternoons		Boord
155—156	2	F., at 3	Ch. 207	Boord
157—158	3	M., W., F., at 11	Ch. 207	Mack
159—	3	M., W., F., at 9	Ch. 207	Henderson
161—161	2 or 3	Laboratory open daily 8 to 12 and 1 to 4		Mack

CHEMISTRY—Continued

Course No.	Hours	Time	Room	Instructor
—164	2	Tu., Th. at 9	Ch. 207	Mack
165—	2	M., W., at 10	Ch. 302	Foulk
167—	3 to 5	To be arranged		Hollingsworth
—168	3 to 5	L., Tu., at 9	Ch. 302	Hollingsworth
		Lab. to be arranged		
169—	3 to 5	To be arranged		Foulk
171—	1	S., at 11	Ch. 101	Boord
173—	2	W., F., at 8	Ch. 101	Henderson
—176	3	M., F., at 11	Ch. 101	Foulk
177—	2	Tu., Th., at 11	Ch. 302	Withrow
—178	1	Tu., at 11	Ch. 302	Withrow
—182		Inspection trip		
—184		Report		
185—	2	Tu., Th., 1 to 4		Withrow, Vilbrandt
—186	3	Tu., Th., S., 8 to 11		Withrow, Vilbrandt
187—187	3	Lab. open afternoons		Henderson
192—	2	Tu., Th., at 10	Ch. 207	Henderson
—194	2	To be arranged		Withrow
201—202	3	To be arranged		Henderson
205—	2 or 3	F., at 1		Boord
—206	2 or 3	Th., at 11		
209—210	3	To be arranged		Henderson
213—	2	To be arranged		
—216	2	To be arranged		Boord
217—	2	Tu., Th., at 4	Ch. 101	Boord
—221	2	M., W., at 11		Henderson
224—	2	Tu., Th., at 11	Ch. 101	
225—226	2	M., F., at 11		Withrow
227—	2	W., at 4	Ch. 101	
235—236	5 to 10	To be arranged		
241—242	3 to 5	To be arranged		Withrow

ECONOMICS AND SOCIOLOGY

ECONOMICS

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 8	P. 12	All Instructors
		M., W., F., at 8	P. 206	
		Tu., Th., S., at 8	P. 7	
		Tu., Th., S., at 8	P. 206	
		M., W., F., at 9	P. 12	
		M., W., F., at 9	P. 13	
		Tu., Th., S., at 9	P. 12	
		Tu., Th., S., at 9	P. 206	
		M., W., F., at 10	P. 12	

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 10	P. 13	
		Tu., Th., S., at 10	P. 109	
		Tu., Th., S., at 10	P. 12	
		M., Th., F., at 11	P. 207	
		M., Th., F., at 11	P. 205	
		Tu., Th., S., at 11	P. 12	
		M., W., F., at 1	P. 12	
		M., W., F., at 1	P. 13	
		M., W., F., at 2	P. 207	
		M., W., F., at 2	P. 109	
		M., W., F., at 3	P. 12	
		M., W., F., at 3	P. 13	
102—101	3	M., W., F., at 8	P. 109	
		Tu., Th., S., at 8	P. 109	
		M., W., F., at 9	P. 109	
		Tu., Th., S., at 9	P. 109	
		Tu., Th., S., at 10	P. 206	
		M., W., F., at 2	P. 6	
		M., W., F., at 3	P. 109	
103—	2	Tu., Th., at 10	P. 6	
—104	2	Tu., Th., at 9	P. 6	Huntington
105—	2	Tu., Th., at 8	P. 13	Ruggles
—106	2	Tu., Th., at 8	P. 12	Walradt
107—108	3	M., W., F., at 9	P. 205	
109—	3	M., W., F., at 8	P. 208	
—112	2	Tu., Th., at 8	P. 6	
119—120	3	M., W., F., at 2	P. 9	Mark
121—	2	Tu., Th., at 9	P. 6	Huntington
122—	3	M., W., F., at 9	P. 6	Huntington
127—128	2	Tu., Th., at 1	P. 12	Dice
129—	2	Tu., Th., at 9	P. 207	Wall
132—133	3	M., W., F., at 8	P. 6	
		Tu., Th., S., at 8	P. 207	
		M., W., F., at 9	P. 7	
		Tu., Th., S., at 9	P. 7	
		M., W., F., at 10	P. 206	
		Tu., Th., S., at 10	P. 7	
		M., Th., F., at 11	P. 7	
		M., W., F., at 1	P. 6	
		M., W., F., at 1	P. 207	
		M., W., F., at 2	P. 206	
—132	3	M., W., F., at 9	Ph. 303	
		M., W., F., at 2	P. 13	
139—140	3	L., Tu., Th., at 8	P. 9	Eckelberry
		Tu., Th., at 9	P. 9	
		Tu., Th., at 9	P. 13	
		Tu., Th., at 10	P. 13	
		Tu., Th., at 10	P. 9	

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., at 11	P. 6	
		Tu., Th., at 1	P. 6	
		Tu., Th., at 1	P. 9	
		Tu., Th., at 2	P. 6	
		Tu., Th., at 3	P. 6	
		Lab., M., 8 to 10	P. 11	
		M., 1 to 3	P. 11	
		M., 3 to 5	P. 11	
		Tu., 10 to 12	P. 11	
		Tu., 1 to 3	P. 11	
		W., 8 to 10	P. 11	
		Th., 10 to 12	P. 11	
		F., 8 to 10	P. 11	
		S., 8 to 10	P. 11	
		S., 10 to 12	P. 11	
140—139	3	L., Tu., Th., at 8	P. 205	
		Tu., Th., at 9	P. 205	
		Tu., Th., at 10	P. 207	
		Tu., Th., at 11	P. 109	
		Tu., Th., at 3	P. 109	
		Lab., Tu., 8 to 10	P. 11	
		Tu., 3 to 5	P. 11	
		W., 1 to 3	P. 11	
		W., 3 to 5	P. 11	
		Th., 8 to 10	P. 11	
141—144	2	Tu., Th., at 10	P. 205	
145—146	2	Tu., 3 to 5	P. 208	Ruggles
147—148	2	Tu., Th., at 1	P. 13	Walradt
149—150	3	M., W., F., at 8	P. 207	Pike
		M., W., F., at 9	P. 207	
		M., W., F., at 10	P. 207	
		M., W., F., at 1	P. 9	
—149	3	M., Th., F., at 11	P. 206	
		M., W., F., at 2	P. 106	
150—	3	M., W., F., at 2	P. 106	
153—154	3	M., Th., F., at 11	P. 9	Dice
157—158	2	Tu., Th., at 9	P. 209	
159—	3	M., W., F., at 1	P. 7	Huntington
160—162	3	M., W., F., at 1	P. 109	
163—	3	M., W., F., at 9	P. 9	
163—163	3	M., W., F., at 10	P. 109	
165—166	3	M., W., F., at 3	P. 7	Hammond
167—168	3	M., W., F., at 8	P. 13	Ruggles
—167	3	M., W., F., at 9	P. 13	
169—	2	Tu., Th., at 1	P. 7	
171—	3	M., W., F., at 8	P. 205	
—172	3	M., W., F., at 2	P. 7	Eckelberry

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
173—	3	M., W., F., at 8	P. 209	Eckelberry
—174	3	M., W., F., at 8	P. 208	Eckelberry
—175	3	M., W., F., at 3	P. 206	
177—178	3	L., Tu., Th., at 1	P. 109	Mark
		Lab., Th., 2 to 4	P. 11	
181—182	3	M., W., F., at 10	P. 9	Walradt
—183	3	M., W., F., at 9	P. 9	Hammond
—184	3	M., W., F., at 9	P. 206	Huntington
185—186	3	M., W., F., at 10	P. 7	Hagerty
—188	2	Tu., Th., at 8	P. 13	Ruggles
189—	2	Tu., Th., at 8	P. 6	Huntington
—190	2	Tu., Th., at 8	P. 209	
201—202	2	To be arranged		Hammond
207—208	2	Th., 4 to 6	L. 305	
209—210	1 to 3	To be arranged		Hammond
211—212	1 to 3	To be arranged		Ruggles
213—214	1 to 3	To be arranged		Lockhart

SOCIOLOGY

101—102	3	M., W., F., at 8	P. 9	All Instructors
		M., W., F., at 8	Ph. 304	
		Tu., Th., S., at 8	P. 208	
		M., W., F., at 9	B. Z. 109	
		M., W., F., at 9	Ph. 302	
		Tu., Th., S., at 9	P. 208	
		M., W., F., at 10	B. Z. 109	
		Tu., Th., S., at 10	P. 208	
		M., Th., F., at 11	P. 13	
		M., W., F., at 1	P. 206	
		M., W., F., at 2	P. 208	
		M., W., F., at 3	P. 208	
102—101	3	M., W., F., at 10	P. 6	
		M., W., F., at 2	P. 101	
104—	3	M., W., F., at 3	P. 205	Clarke
107—	3	M., W., F., at 2	P. 12	
—108	1	Tu., at 8	Arch. M.	Mills
109—	4	M., W., F., at 8	P. 7	Hagerty
		Lab., S., 9 to 12		
111—	3	M., W., F., at 9	P. 206	Gettys
—112	4	M., W., F., at 8	P. 7	Hagerty
		Lab., S., 9 to 12		
—114	3	M., W., F., at 9	Ph. 304	
115—116	8	To be arranged		Mark
117—118	2	Tu., 4 to 6	P. 209	Hagerty
123—124	3	M., W., F., at 3	P. 6	
125—126	3	M., W., F., at 1	P. 208	Hagerty
127—128	3	M., W., F., at 10	P. 208	Gettys
129—130	2	M., W., at 2	P. 209	North

ECONOMICS AND SOCIOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
131—132	3	M., W., F., at 9	P. 208	Hagerty
133—	3	M., W., F., at 10	P. 205	
—134	3	M., W., F., at 3	P. 9	
—136	3	M., W., at 2	P. 12	
		Lab., Tu., 2 to 4		
137—	3	M., W., F., at 3	P. 9	
139—140	1	To be arranged		
201—202	2	To be arranged		
207—208	2	Th., 4 to 6	P. 7	

ENGINEERING DRAWING

101—	2	M., W., 8 to 10	Br.	All Instructors
		M., Tu., 10 to 12	Br.	
		M., W., 1 to 3	Br.	
		M., W., 3 to 5	Br.	
		Tu., Th., 8 to 10	Br.	
		Tu., Th., 1 to 3	Br.	
		Tu., Th., 3 to 5	Br.	
		F., S., 8 to 10	Br.	
		F., S., 10 to 12	Br.	
—101	2	F., S., 8 to 10	Br.	
102—	3	L., M., at 8	Br. 200	
		M., 9 to 11; Tu., 8 to 10	Br.	
—102	3	L., Tu., at 10	Br. 200	All Instructors
		W., at 8	Br. 200	
		W., at 9	Br. 200	
		W., at 10	Br. 203, 200	
		F., at 1	Br. 203, 200	
		F., at 2	Br. 200, 1	
		F., at 3	Br. 203	
		Lab., M., W., 8 to 10	Br.	
		M., Tu., 10 to 12	Br.	
		M., W., 1 to 3	Br.	
		M., W., 3 to 5	Br.	
		Tu., Th., 8 to 10	Br.	
		Tu., Th., 1 to 3	Br.	
		Tu., Th., 3 to 5	Br.	
		F., S., 8 to 10	Br.	
		F., S., 10 to 12	Br.	
103—	3	L., M., W., F., at 8	Br. 203	All Instructors
		Tu., Th., S., at 8	Br. 109	
		Tu., Th., S., at 8	Br. 200	
		M., W., F., at 9	Br. 200	
		M., W., F., at 10	Br. 203	
		M., W., F., at 1	Br. 200	
		M., W., F., at 2	Br. 200	

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 3	Br. 200	
		M., W., F., at 3	Br. 104	
		Tu., Th., F., at 3	Br. 203	
—104	3	L., M., at 10	Br. 203	Williams
		M., at 1	Br. 200	
		M., at 3	Br. 200	Williams
		Tu., at 8	Br. 203	Svensen
		Tu., at 2	Br. 203	
		Tu., at 3	Br. 203	Withrow
		Th., at 9	Br. 203	
		Lab., M., Tu., 8 to 10	Br.	
		Tu., W., 1 to 3	Br.	
		Th., F., 10 to 12	Br.	
		F., S., 8 to 10	Br.	
		F., 1 to 3; S., 10 to 12	Br.	
105—	3	M., W., F., at 9	Br. 203	Turnbull
		M., W., F., at 2	Br. 203	
		M., W., F., at 2	Br. 109	
—106	3	L., Tu., Th., at 8	Br. 200	Turnbull
		M., W., at 1	Br. 203	Turnbull
		Lab., Th., 9 to 11	Br.	
		M., 2 to 4	Br.	
107—	3	M., W., F., at 1	Br. 203	Meiklejohn
108—	3	Tu., Th., S., at 8	Br. 203	French
—110	2	M., Tu., 8 to 10	Br.	Williams
		W., Th., 10 to 12	Br.	
		F., S., 8 to 10	Br.	
		F., S., 10 to 12	Br.	
111—	2	M., Tu., 8 to 10	Br.	Williams, Svensen
		M., Tu., 1 to 3	Br.	
		Th., F., 1 to 3	Br.	
121—122	2	M., W., 1 to 3	Br.	Withrow, Svensen
125—125	2	L., Tu., at 1	Br. 200	French
		Tu., at 2	Br. 200	
		Th., at 9	Br. 200	Meiklejohn
		Th., at 3	Br. 200	
		F., at 10	Br. 200	
		F., at 1	Br. 104	
		Lab., M., 8 to 11	Br.	
		W., 1 to 4	Br.	
		F., 8 to 11	Br.	
		F., 1 to 4	Br.	
127—	1½	S., 8 to 11	Br. 203	French,
—128	1½	S., 8 to 11	Br. 203	Turnbull French

ENGINEERING DRAWING—Continued

Course No.	Hours	Time	Room	Instructor
129—	1	S., 8 to 10	Br.	
—130	2	S., 8 to 12	Br.	
131—132	3	M., W., 1 to 4	Br.	French
139—	4	Th., F., 1 to 4	Br.	Svensen
—140	3	Th., F., 1 to 4	Br.	Svensen

ENGLISH

101—104	2	M., W., at 8	Ph. 102, 104, 302	All Instructors
		M., W., at 9	Ph. 304, Ha. 106	
		M., W., at 10	Ph. 202, 303	
		M., F., at 11	Ph. 204, 104	
		M., W., at 1	Ph. 302, 303	
		M., W., at 2	Ph. 304, 303	
		M., W., at 3	Ph. 104, 204	
		Tu., Th., at 8	Ph. 104, 102, Ha. 211	
		Tu., Th., at 9	Ph. 104, 204, Ha. 106	
		Tu., Th., at 10	U. 202, Ha. 200, 210	
		Tu., Th., at 1	Ph. 104, 204, U. 202	
		Tu., Th., at 2	Ph. 104, 204, 102	
		Tu., Th., at 3	Ph. 104, 204, 102	
		Tu., Th., at 4	Ph. 104	
104—101	2	Tu., Th., at 8	Ph. 303	Beck
		Tu., Th., at 1	Ph. 102	
		Tu., Th., at 4	Ph. 102	
105—106	2	Tu., Th., at 10	Ph. 104	Graves
		M., W., at 2	Ph. 104	
107—108	2	Tu., Th., at 10	Ph. 204	
127—128	2	Tu., Th., at 10	Ph. 303	McKnight
		M., W., at 2	Ph. 303	McKnight
133—133	3	M., W., F., at 10	Ph. 104	Taylor
		Tu., Th., S., at 10	Ph. 302	
		M., W., F., at 3	Ph. 302	Graves
136—	3	M., W., F., at 1	Ph. 104	Percival
—137	3	M., W., F., at 1	Ph. 104	Percival
141—142	3	M., W., F., at 9	Ph. 102	Taylor
		Tu., Th., S., at 9	Ph. 102	
		M., W., F., at 10	Ph. 304	
		M., W., F., at 1	Ph. 102	
		M., W., F., at 3	Ph. 102	Percival
143—144	3	M., W., F., at 2	Ph. 102	Andrews
145—146	3	M., W., F., at 8	Ph. 204	Percival
		Tu., Th., S., at 8	Ph. 204	
		M., W., F., at 10	Ph. 204	Beck
		M., W., F., at 1	Ph. 204	McKnight
		M., W., F., at 2	Ph. 302	Graves
154—153	3	M., W., F., at 3	L. 104	McKnight

ENGLISH—Continued

Course No.	Hours	Time	Room	Instructor
155—156	3	M., W., F., at 2	Ph. 204	Taylor
157—158	3	M., W., F., at 9	Ph. 204	Graves
159—160	2	Tu., Th., at 2	Ph. 303	Andrews
165—166	3	M., Tu., F., at 11	Ph. 102	Denney
167—168	3	M., W., F., at 10	Ph. 102	Denney
169—170	3	M., W., F., at 9	Ph. 104	
181—	2	Tu., Th., at 10	Ph. 102	Denney
201—202	2	W., 4 to 6	L. 105	Graves
205—206	2	M., 4 to 6	L. 104	Denney
207—208	2	Tu., 4 to 6	L. 104	Taylor
209—	2	Tu., 4 to 6	L. 105	McKnight
—212	2	Tu., 4 to 6	L. 105	McKnight
213—214	2	Th., 4 to 6	L. 104	
215—216	2	Th., 4 to 6	Ph. 204	Andrews
217—218	2	Th., 4 to 6	L. 105	Percival
219—220	2	W., 4 to 6	L. 104	Denn-y

For Short Courses Only

91— 92	2	Tu., Th., at 8
		Tu., Th., at 10
		Tu., Th., at 2
		Tu., Th., at 3

PUBLIC SPEAKING (See Public Speaking)

EUROPEAN HISTORY

101—102	3	M., W., F., at 8	U. 301	All Instruc- tors
		M., W., F., at 8	U. 302	
		M., W., F., at 9	U. 301	
		Tu., Th., S., at 9	U. 302	
		M., W., F., at 10	U. 301	
		Tu., Th., S., at 10	U. 302	
		Tu., Th., S., at 11	U. 302	
		M., W., F., at 1	U. 301	
		M., W., F., at 1	U. 302	
		M., W., F., at 2	U. 301	
		M., W., F., at 3	U. 301	
102—101	3	M., W., F., at 9	U. 302	Perkins Knipfing Siebert Siebert McNeal Perkins Knipfing All Instruc- tors
		M., W., F., at 1	U. 302	
103—104	3	M., W., F., at 8	U. 303	
105—106	3	M., W., F., at 9	U. 303	
109—110	2	Tu., Th., at 11	U. 301	
113—114	3	M., W., F., at 10	U. 302	
121—122	2	Tu., Th., at 9	U. 301	
123—124	3	M., W., F., at 2	U. 302	
125—126	2	W., 4 to 6	U. 303	
129—130	2	Th., 4 to 6	U. 303	

EUROPEAN HISTORY—Continued

Course No.	Hours	Time	Room	Instructor
131—132	3	M., W., F., at 8	U. 202	Washburne
		M., W., F., at 2	U. 303	McNeal
135—136	3	M., W., F., at 1	U. 306	All Instruc- tors
141—142	2	Tu., Th., at 10	U. 301	Washburne
143—144	2	Tu., Th., at 10	U. 303	Siebert
—152	2	Tu., Th., at 9	U. 303	Siebert, Perkins
203—204	2 to 5	To be arranged	Li.	Siebert

GEOLOGY

101—102	8	M., W., F., at 8	O. 1	
		M., W., F., at 1	O. 1	
102—101	3	M., W., F., at 9	O. 1	
		M., W., F., at 2	O. 1	
103—	3	M., W., F., at 10	O. 105	Bownocker
—104	3	M., W., F., at 10	O. 105	Carman
105—	3 to 5	To be arranged; fields trips Saturday		Carman
—106	3	To be arranged; field trips Saturday		
107—108	2 to 5	To be arranged		Carman
113—114	2 to 5	To be arranged		Carman
116—	3	To be arranged		
121—	3	M., W., F., at 10	O. 1	Tucker
—124	3	M., W., F., at 10	O. 1	Tucker
—128	3	M., W., F., at 4	O. 105	
141—142	2 to 5	To be arranged		Bownocker, Carman
151—151	Agr. 3	L., Tu., Th., at 8	O. 105	Lamborn
		Tu., Th., at 9	O. 1 (2nd Sem.)	
		Tu., Th., at 10	O. 105	
			O. 1	
		Tu., Th., at 1	O. 105 (2nd Sem.)	
			O. 105	
		Tu., Th., at 2	O. 1 (2nd Sem.)	
		Tu., Th., at 3	O. 105	
		Lab., M., 8 to 10		
		M., 1 to 3		
		W., 8 to 10		
		W., 1 to 3		
		F., 8 to 10		
		F., 1 to 3		
—162	4	M., W., F., at 9	O. 105	
165—	3	Tu., Th., at 10	O. 105	Lamborn

GEOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., F., 10 to 12		
—165	3	W., F., at 10	O. 11	Bownocker
		Lab., M., 2 to 4		
—166	2	Tu., at 9; W., 2 to 4	O. 11	Bownocker
167—	3	M., W., F., at 8	O. 105	Bownocker
168—	3	L., M., Th., at 11	O. 105	Lamborn
		Lab., Tu., 2 to 4		
		L., Tu., Th., at 9	O. 1	
		Lab., Th., 2 to 4		
—168	3	L., Tu., Th., at 9	O. 1	Carman
		Lab., Th., 2 to 4		Carman
—170	3	M., W., F., at 8	O. 105	Bownocker
201—202	3 to 5	To be arranged		Bownocker, Carman
203—204	3 to 5	To be arranged		Carman

GERMAN

101—102	4	M., W., F., S., at 8	U. 320	Barrows
		M., W., F., S., at 9	U. 320	Evans
		M., Tu., W., Th., at 2	U. 320	Eisenlohr
		M., Tu., W., Th., at 3	U. 320	Thomas
—101	4	M., Tu., W., Th., at 1	U. 319	Thomas
102—103	4	M., W., F., S., at 9	U. 202	Eisenlohr
103—104	4	M., Tu., Th., F. at 11	U. 319	Barrows
103—106	4	M., W., F., S., at 10	U. 320	Evans
		M., Tu., W., Th., at 2	U. 319	Thomas
104—	4	M., Tu., W., Th., at 1	U. 319	Thomas
—106	4	M., Tu., W., Th., at 3	U. 319	Barrows
107—108	4	M., W., F., S., at 10	U. 319	Eisenlohr
117—118	2	Tu., Th., at 10	U. 319	Thomas
131—132	2	Tu., Th., at 2	U. 303	Barrows
175—	2	Tu., Th., at 3	U. 319	Barrows
179—180	2 or 4	M., F., at 11	L. 308	Eisenlohr,
		Tu., Th., at 11	L. 308	Evans
181—182	2	To be arranged		Evans
197—	2	To be arranged		Barrows
215—216	2	Tu., 4 to 6	L. 308	Evans

GREEK LANGUAGE AND LITERATURE

101—102	4	M., Tu., Th., F., at 11	U. 306	Bolling
115—116	2	Tu., Th., at 10	U. 306	Bolling
121—122	2 to 4	To be arranged		
125—126	4	M., Tu., W., Th., at 2	U. 306	Bolling
129—130	3	To be arranged		Bolling
131—132	1	To be arranged		Bolling
133—134	2	M., F., at 10	U. 306	Bolling
141—	2	To be arranged		Bolling
151—152	2 to 4	To be arranged		Bolling

HISTORY AND PHILOSOPHY OF EDUCATION

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., F., at 10	Ha. 101	Anderson
		M., W., F., at 4	Ha. 101	Anderson
103—104	2	Tu., Th., at 10	Ha. 101	Anderson
105—106	2	Tu., Th., at 9	Ha. 101	Anderson
107—108	2	M., W., at 3	Ha.	Anderson
109—110	2	Tu., Th., at 3	Ha. 101	Anderson
—112	2	Tu., Th., at 2	Ha. 101	Anderson
201—202	2	Tu., 4 to 6	Ha. 101	Anderson
203—204	2	To be arranged		Anderson
—206	1	M., at 9	Ha.	Anderson

HOME ECONOMICS

101—102	5	L., M., W., at 9	H. E. 203	
		M., W., at 2	H. E. 102	
		Q., F., at 9	H. E. 102	
		F., at 1	H. E. 102	
		F., at 2	H. E. 102	
		S., at 9	H. E. 102	
		Lab., 1st sem. (101)		
		M., W., 1 to 3	H. E.	
		2nd sem. (102)		
		Tu., Th., 1 to 3	H. E.	
		1st sem. (101)		
		Tu., Th., 8 to 10	H. E.	
		2nd sem. (102)		
		Tu., Th., 10 to 12	H. E.	
		1st sem. (101)		
		M., W., 9 to 11	H. E.	
		2nd sem. (102)		
		Tu., Th., 8 to 10	H. E.	
		1st sem. (101)		
		Tu., Th., 1 to 3	H. E.	
		2nd sem. (102)		
		Tu., Th., 3 to 5	H. E.	
104—	3	M., W., F., at 4	H. E. 203	Linder
—104	3	M., W., F., at 4	H. E. 203	Linder
105—105	2	W., at 10	H. E. 218	Van Meter
		Lab. to be arranged		
—106	2 to 5	To be arranged	H. E.	
—110	4	Tu., Th., 9 to 12	H. E. 203	
		M., W., 9 to 12	H. E. 102	
111—112	2	L., Tu., at 3	H. E. 218	Walker
		Th., at 11	H. E. 218	
		Lab., Tu., 8 to 11	H. E.	
		W., 1 to 4 (1st sem. only)	H. E.	
		Th., 8 to 11	H. E.	

HOME ECONOMICS—Continued

Course No.	Hours	Time	Room	Instructor
		F., 9 to 12	H. E.	
		F., 1 to 4	H. E.	
113—	3	L., Th., at 10	H. E. 203	
		Lab., Tu., F., 10 to 12	H. E. 113, 114	
		Tu., Th., 1 to 3	H. E.	
		M., W., 1 to 3	H. E.	
—113	3	L., Tu., at 10	H. E. 203	
		Tu., Th., 1 to 3	H. E. 113, 114	
—116	3	L., Th., at 10	H. E. 203	
		Lab., M., W., 1 to 3	H. E. 113	
		M., W., 8 to 10	H. E. 113	
118—118	3	F., at 11; Tu., Th., 10 to 12	H. E. 218	
		F., at 3; Tu., Th., 2 to 4	H. E. 218	
119—	4	M., W., at 3; F., 2 to 4	H. E. 218	Walker
—119	4	M., W., at 9; F., 9 to 11	H. E. 218	Walker
		M., W., at 3; F., 2 to 4	H. E. 218	Walker
121—	3	W., at 10	H. E. 203	
		Lab., Tu., Th., 8 to 10	H. E. 302	
		M., F., 10 to 12	H. E. 302	
125—126	3	To be arranged		
127—128	3	L., Tu., Th., at 11	H. E. 102	
		Observation and practice hours to be arranged		
133—	4	M., W., F., at 9	H. E.	
		Lab. to be arranged		
201—202	2 to 5	To be arranged	H. E.	

INDUSTRIAL EDUCATION

111—112	3	M., Tu., at 11	S.	Usry
		1 hour to be arranged		
117—118	2	Lab., Tu., 1 to 4	S.	Usry
123—123	2	M., W., at 10	S.	Usry
125—125	2	M., W., 1 to 4	S.	
127—128	3	M., W., 1 to 4	S.	Smith
129—129	3	Th., 1 to 4; S., 8 to 11	S.	Smith
131—131	3	Th., 1 to 4; S., 8 to 11	S.	
—132	3	Tu., 1 to 4	S.	Smith
133—134	2	Tu., 8 to 11	S.	Usry
135—135	2	M., 1 to 4 or F., 1 to 4	S.	
136—136	2	M., 1 to 4 or F., 1 to 4	S.	
—137	2	M., Tu., at 11	S.	Smith
138—138	2	M., Tu., at 11	S.	

JOURNALISM

Course No.	Hours	Time	Room	Instructor
101—102	3	M., W., at 9	S. 208	Myers
		M., W., at 1	S. 208	Myers
		Lab. to be arranged		
102—101	3	Tu., Th., at 9	S. 201	Myers
103—104	3	M., W., F., at 8	S. 208	Hooper
105—106	3	Tu., Th., at 11	S. 208	Myers
		Lab., to be arranged		
107—108	3	M., W., F., at 10	S. 208	Hooper
109—110	2	Tu., at 10; Lab to be arranged	S. 208	Myers
113—	2	Tu., Th., at 8	S. 208	Myers
115—116	2	Tu., Th., at 9	S. 208	Hooper
—119	2	Tu., Th., at 8	S. 208	Myers

LATIN

101—102	4	M., W., F., S., at 9	U. 306	Hodgman
		M., W., F., S., at 10	U. 303	Elden
103—104	3	M., W., F., at 10	U. 316	Hodgman
105—106	2	Tu., Th., at 9	L. 311	Elden
107—	2	M., W., at 4	U. 316	Smith
—109	2	M., W., at 4	U. 316	Derby
111—112	1	M., at 3	U. 316	Elden
113—114	3	M., W., F., at 9	U. 316	Elden
115—116	3	M., Th., F., at 11	U. 316	Hodgman
119—120	1 or 2	Tu., at 4	U. 306	Hodgman
121—122	2 to 5	Tu., F., at 4	U. 316	Derby
123—124	1	Tu., at 3	U. 306	Hodgman
125—126	1	W., at 3	U. 306	Elden
129—130	2	Tu., Th., at 10	U. 316	Hodgman
147—148	4	M., Tu., W., Th., at 1	U. 316	Smith
149—150	4	M., Tu., W., Th., at 2	U. 316	Smith
201—202	1	F., at 9	L. 311	Hodgman
203—204	1	F., at 3	U. 316	Elden
213—214	2 or 3	Tu., Th., at 11	L. 311	Derby

MATHEMATICS

107—107	3	M., W., F., at 8	U. 310	Rickard
		Tu., Th., S., at 8	U. 310	
		M., W., F., at 9	U. 310	Rasor
		M., W., F., at 1	U. 310	Bareis
		M., W., F., at 2	U. 310	
		M., W., F., at 2	U. 312	Rasor
		M., W., F., at 3	U. 310	Arnold
		M., W., F., at 3	U. 312	

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
121—122	3	M., W., F., at 8	U. 312	Swartzel
		Tu., Th., S., at 8	U. 312	
		M., W., F., at 9	U. 308	
		Tu., Th., S., at 9	U. 310	
		M., Tu., F., at 11	U. 310	
		M., W., F., at 1	U. 312	
		M., W., F., at 2	U. 308	
125—126	2	Tu., Th., at 3	L. 306	Arnold
127—128	3	M., W., F., at 3	U. 311	Weaver
129—130	3	M. W., F., at 8	U. 313	Kuhn
		M., W., F., at 1	U. 313	
131—132	5	M., Tu., Th., F., S., at 8	U. 309	All Instruc- tors
		M., Tu., Th., F., S., at 8	U. 311	
		M., Tu., Th., F., S., at 9	U. 309	
		M., Tu., Th., F., S., at 9	U. 311	
		M., Tu., Th., F., S. at 10	U. 310	
		M., Tu., Th., F., S. at 10	U. 311	
		M., Tu., Th., F., S. at 10	U. 309	
		M., Tu., W., F., S., at 11	U. 309, U. 320	
		M., Tu., W., Th., F., at 12	U. 309	
		M., Tu., W., Th., F., at 1	U. 309	
		M., Tu., W., Th., F., at 1	H. F. 205	
		M., Tu., W., Th., F., at 1	U. 311	
		M., Tu., W., Th., F., at 2	H. F. 205	
		M., Tu., W., Th., F., at 2	U. 311, Lo. 208	
		M., Tu., W., Th., F., at 3	U. 309	
		M., Tu., W., Th., F., at 3	U. 308	
132—131	5	M., Tu., Th., F., S., at 10	H. F. 106	
		M., Tu., W., Th., F., at 2	Lo. 125	
		M., Tu., W., Th., F., at 3	H. F. 205	
135—	3	M., W., F., at 2		
141—142	5	M., Tu., Th., F., S., at 8	U. 308	All Instruc- tors
		M., Tu., Th., F., S., at 8	H. F. 106	
		M., Tu., Th., F., S., at 8	U. 319	
		M., Tu., Th., F., S., at 9	U. 312	
		M., Tu., Th., F., S., at 9	U. 313	
		M., Tu., Th., F., S., at 10	U. 308	
		M., Tu., Th., F., S., at 10	U. 313	
		M., Tu., Th., F., S., at 10	U. 312	
		M., Tu., Th., F., S., at 11	U. 313	
		M., Tu., Th., F., S., at 11	U. 312	
		M., Tu., W., Th., F., at 1	U. 308	
		M., Tu., W., Th., F., at 1	H. F. 106	
		M., Tu., W., Th., F., at 2	U. 309	
		M., Tu., W., Th., F., at 2	H. F. 106	
		M., Tu., W., Th., F., at 3	U. 313	
		M., Tu., W., Th., F., at 3	H. F. 106	

MATHEMATICS—Continued

Course No.	Hours	Time	Room	Instructor
142—141	5	M., Tu., Th., F., S., at 10	H. F. 205	Bareis
		M., Tu., W., Th., F., at 3	Lo. 125	Rickard
149—150	3	To be arranged		Weaver
165—166	3	M., W., F., at 12	U. 313	Morris
167—168	3	M., Th., F., at 11	U. 311	Bohannon
171—172	3	M., W., F., at 2	U. 313	Bareis
173—174	3	M., W., F., at 10	L. 306	Kuhn
—181	3	M., W., F., at 3		
183—184	2	M., F., at 11	U. 308	
185—186	2	Tu., Th., at 2	U. 312	Arnold
187—	3	M., W., F., at 3		
—190	2	M., W., at 2		
201—202	3	M., W., F., at 1	L. 306	Rasor
203—204	3	M., Th., F., at 11		Swartzel
205—206	3	To be arranged		Bohannon
207—	3	To be arranged		Arnold
209—210		To be arranged		
211—212		To be arranged		Kuhn
213—214		To be arranged		Rasor
215—216		To be arranged		
217—218		To be arranged		Swartzel
219—220		To be arranged		
221—222		To be arranged		Kuhn

MECHANICS

101—102	5	Daily at 8	Lo. 232	Boyd
		Daily at 9	Lo. 232	Draffin
		Daily at 10	Lo. 232	Boyd
		Daily at 1	L. 232	Coddington
		Daily at 3	Lo. 232	
101—	5	M., Tu., Th., F., S., at 11	Br. 203	
—102	5	Daily at 2	Lo. 232	
103—	5	Daily at 11	Lo. 232	Boyd
—104	2	Tu., Th., at 11	Lo. 107	Draffin
201—202	3	To be arranged		Boyd, Coddington

MILITARY SCIENCE AND TACTICS

101—102 (Infantry)	1	M., W., F., at 8; Th., at 11		
		Tu., Th., S., at 8; Th., at 11		
		M., W., F., at 9; Th., at 11		
		Tu., Th., S., at 9; Th., at 11		
		M., W., F., at 10; Th., at 11		
		Tu., Th., S., at 10; Th., at 11		
		M., Tu., F., at 11; Th., at 11		
		M., W., F., at 1; Th., at 11		

MILITARY SCIENCE AND TACTICS—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 2; Th., at 11		
		M., W., F., at 3; Th., at 11		
		M., W., F., at 4; Th., at 11		
103—104 (Infantry)	1	M., W., F., at 8		
		Tu., Th., S., at 8		
		M., W., F., at 9		
		Tu., Th., S., at 9		
		M., W., F., at 10		
		Tu., Th., S., at 10		
		M., Tu., F., at 11		
		M., W., F., at 1		
		M., W., F., at 2		
		M., W., F., at 3		
		M., W., F., at 4		
105—106 (Artillery)	1	M., W., F., at 8; Th., at 11		
		Tu., Th., S., at 8; Th., at 11		
		M., W., F., at 9; Th., at 11		
		Tu., Th., S., at 9; Th., at 11		
		M., W., F., at 10; Th., at 11		
		Tu., Th., S., at 10; Th., at 11		
		M., Tu., F., at 11; Th., at 11		
		M. W., F., at 1; Th., at 11		
		M., W., F., at 2; Th., at 11		
		M., W., F., at 3; Th., at 11		
		M., W., F., at 4; Th., at 11		
107—108 (Artillery)	1	M., W., F., at 8		
		Tu., Th., S., at 8		
		M., W., F., at 9		
		Tu., Th., S., at 9		
		M., W., F., at 10		
		Tu., Th., S., at 10		
		M., Tu., F., at 11		
		M., W., F., at 1		
		M., W., F., at 2		
		M., W., F., at 3		
		M., W., F., at 4		
125—126	2	To be arranged		
127—128	2	To be arranged		
135—136	2	To be arranged		
137—138	2	To be arranged		

MINERALOGY

102—	3	M., W., F., at 8	Lo. 107	McCaughey
—102	3	M., W., F., at 8	Lo. 107	McCaughey
		M., W., F., at 9	Lo. 107	McCaughey
104—	3	M., Tu., 1 to 4	Lo. 107	McCaughey

MINERALOGY—Continued

Course No.	Hours	Time	Room	Instructor
105—	2	Tu., Th., at 8	Lo. 107	McCaughey
111—	2	To be arranged		
113—	3	Th., at 9	Lo. 109	McCaughey
		F., 1 to 4		McCaughey
—113	3	Th., at 9	Lo. 107	McCaughey
		Th., 1 to 4		McCaughey
121—	3 to 5	To be arranged	Lo.	McCaughey
123—124	5	To be arranged	Lo.	McCaughey
131—131	3 to 5	To be arranged		

PHILOSOPHY

101—104	3	L., M., F., at 9	H. F. 206	Leighton
		Q., W., at 9	L. 307	
		W., at 9	U. 321	
		Th., at 9	L. 307	
		Th., at 9	U. 202	
		S., at 9	U. 321	
101—102	3	L., Tu., Th., at 10	H. F. 206	Williams
		Q., F., at 10	U. 321	
		F., at 10	L. 307	
		S., at 10	U. 321	
		L., Tu., Th., at 2	H. F. 206	Chandler
		Q., W., at 2	L. 307	
		F., at 2	U. 319	
		F., at 2	U. 306	
102—101	3	L., M., F., at 8	H. F. 206	Avey
		Q., W., at 8	L. 307	
		W., at 8	U. 209	
		Th., at 8	U. 321	
105—106	3	M., W., F., at 8	U. 321	Williams
		M., W., F., at 1	U. 321	Leighton
107—108	3	M., W., F., at 2	U. 321	Avey
111—112	2	M., W., at 10	U. 321	Williams
113—114	2	Tu., Th., at 11	U. 321	Avey
115—116	2	Tu., Th., at 11	L. 307	Chandler
117—118	2	M., W., at 11	U. 321	Avey
121—122	3	M., W., F., at 10	L. 309	Leighton
125—126	3	To be arranged		Chandler
134—	2	M., W., at 1	L. 307	Leighton
138—139	3	M., W., F., at 3	U. 321	Williams
141—142	2	Tu., Th., at 9	U. 321	Chandler
—150	2	Tu., Th., at 8	U. 321	Williams
201—202	3 to 6	To be arranged		
207—208	3 to 6	To be arranged		
209—210	2	To be arranged		

PHYSICAL EDUCATION

FOR MEN

Hygiene

Course No.	Hours	Time	Room	Instructor
100—100	1	Monday at 11		Nichols
	1	Monday at 2		Nichols
	1	Tuesday at 8		Nichols
	1	Wednesday at 10		Nichols
	1	Wednesday at 2		Nichols
	1	Thursday at 8		Nichols
	1	Thursday at 10		Nichols
	1	Friday at 11		Nichols

FOR MEN

101—102	1	Tu., Th., at 1 Tu., Th., at 2 M., W., at 1 M., W., at 2 M., F., at 2 W., F., at 2 Tu., Th., at 3 M., W., at 3 M., F., at 3 W., F., at 3 Tu., Th., at 4 M., W., at 4 M., F., at 4 W., F., at 4 (Hours to be arranged for corrective work)		Nichols and all instruc- tors
107—	2	Tu., Th., at 3	Ath. House	St. John, Wilce, Castleman
—110	2	M., Th., at 11	Ath. House	Wilce
111—	1	Tu., at 4	P. 109	Castleman
—112	1	Tu., at 4	P. 109	Wilce
113—	1	Th., at 4	P. 109	St. John
—120	2	Tu., F., at 10		Nichols
—122	2	L., Th., at 10 Lab., Tu., Th., at 5	Gymnasium	Nichols, Cobb
125—	2	Tu., F., at 10		Nichols

FOR WOMEN

100—100	1	Tu., at 11		
131—132	1	2 hours to be arranged		Meyer, Scofield, Ranck
133—134	1	3 hours to be arranged		Meyer
135—136	3	Tu., Th., 9 and 3		Meyer

PHYSICS

Course No.	Hours	Time	Room	Instructor
108—104	4	M., W., F., at 8	Ph. 205	Earhart
		M., W., F., at 3	Ph. 205	Earhart
		Lab., M., 1 to 3	Ph.	
		W., 9 to 11	Ph.	
		W., 1 to 3	Ph.	
105—106	4	F., 1 to 3	Ph.	
		M., W., F., at 10	Ph. 205	Earhart,
				Blake
		M., W., F., at 3	Ph. 200	Earhart,
				Blake
109—109	3 Agr.	Lab., Tu., 8 to 11		
		Tu., 1 to 4		
		Th., 1 to 4		
		S., 8 to 11		
		M., W., F., at 8	Ph. 202	Cole
111—112	3 Cer.	M., W., F., at 9	Ph. 202	Cole
		M., W., F., at 1	Ph. 202	Cole
		M., W., F., at 2	Ph. 202	Cole
		(1st Sem.)		
		Tu., Th., at 9; M., 1 to 3	Ph. 205	
—111	8	(2nd Sem.)		
		Tu., Th., at 10; Tu., 8 to 10	Ph. 205	
		(1st Sem. only)		
		Civil Tu., Th., at 9; W., 1 to 3	Ph. 205	
		Tu., Th., at 2; Th., 10 to 12	Ph. 205	
		Tu., Th., at 2; S., 10 to 12	Ph. 205	
		(1st Sem.)		
		Chem. M., W., at 1	Ph. 205	
		Lab., M., 8 to 10		
		M., 10 to 12		
		Th., 8 to 10		
		(2nd Sem.)		
		M., 10 to 12		
		Tu., 10 to 12		
		Th., 2 to 5		
113—	5 Mech.	(1st Sem.)		
		Mine Tu., Th., at 9; S., 10 to 12	Ph. 205	
		(2nd. Sem.)		
		Tu., Th., at 10; M., 10 to 12	Ph. 205	
		(1st Sem.)		
—111	8	Arch. Engr. M., F., at 11; Tu., 8 to 10	Ph. 205	
		(2nd Sem.)		
		M., W., at 1; Tu., 8 to 10	Ph. 205	
113—	5 Mech.	To be arranged	Ph.	Cole
		L., M., Tu., W., Th., at 9	Ph. 200, 301	All Instruc-
		Lab., Th., 1 to 3		tors
113—	5 Mech.	S., 8 to 10		
		L., M., Tu., W., Th., at 2	Ph. 200, 202	

PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
		Lab., F., 8 to 10		
		F., 10 to 12		
Elect.		L., M., Tu., W., Th., at 9	Ph. 200, 307	
		Lab., M., 1 to 3		
		Tu., 1 to 3		
		F., 1 to 3		
		L., M., Tu., W., Th., at 2	Ph. 200, 307	
		Lab., Tu., 8 to 10		
		W., 8 to 10		
Gen.		L., M., Tu., W., Th., at 2	Ph. 200, 202	
		Lab., F., 8 to 10		
115—116	2	To be arranged	Ph.	Earhart, Smith, Heil
117—	2 Arch.	Tu., Th., at 2	Ph. 301	All Instruc- tors
—118		M., W., at 1	Ph. 301	
—119	3 Mech.	M., W., F., at 9	Ph. 205	
		M., W., F., at 2	Ph. 200	
—120	2	To be arranged	Ph.	Cole
121—122	3 to 5	M., Tu., 1 to 4	Ph.	Smith
123—124	3 to 5	M., Tu., 1 to 4	Ph.	Smith
—125	5 Civil	L., M., Tu., W., Th., at 10	Ph. 200	
		Lab., Tu., 3 to 5		
		L., M., Tu., W., Th. at 2	Ph. 205	
		Lab., M., 8 to 10		
		L., M., Tu., W., Th., at 2	Ph. 301	
		Lab., S., 10 to 12		
129—	2	Tu., Th., at 10	Ph. 205	
		Tu., Th., at 3	Ph. 205	
—130	6	L., M., Tu., at 11; F., at 9	Ph. 202, 301	
		Lab., M., Tu., 1 to 4		
		L., M., W., F., at 2	Ph. 307	
		Lab., M., Tu., 8 to 11		
		W., Th., 8 to 11		
		F., S., 8 to 11		
		L., M., Tu., F., at 11	Ph. 202	
		Lab., W., Th., 1 to 4		
—132	2	Tu., at 10; Th., 10 to 12	Ph. 202	
		Tu., at 2; Th., 8 to 10	Ph. 202	
		Tu., at 2; Th., 1 to 3	Ph. 202	
		Th., at 2; M., 10 to 12	Ph. 202	
		Th., at 11; F., 1 to 3	Ph. 202	
135—	5 Elec.	Tu., Th., at 1	Ph. 205	Alpheus Smith
		Lab., W., Th., 8 to 11		
		F., S., 8 to 11		
—136	4	To be arranged	Ph.	
137—	3 to 5	To be arranged	Ph.	Alva Smith

- PHYSICS—Continued

Course No.	Hours	Time	Room	Instructor
—138	2 Mech.	M., Tu., 1 to 3 W., Th., 8 to 10 W., Th., 1 to 3 F., S., 8 to 10	Ph. Ph. Ph. Ph.	Blake, Heil Smith, Heil Alva Smith Cole
139—140	3 to 5	To be arranged	Ph.	
145—146	1	Tu., at 11	Ph. 205	
147—148	3	To be arranged	Ph.	
169—170	2	To be arranged	Ph.	
201—202	3 to 5	To be arranged	Ph.	
207—208		To be arranged	Ph.	
211—212		To be arranged	Ph.,	
215—216		To be arranged	Ph.	

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND
PHARMACOLOGY

101—102	3	M., W., F., at 8 Tu., Th., S., at 8 M., W., F., at 9 Tu., Th., S., at 9 M., W., F., at 10 M., W., F., at 1 M., W., F., at 1 M., W., F., at 2 M., W., F., at 3	Bio. 200 Bio. 200 Bio. 200 Bio. 200 Bio. 200 Bio. 200 Bio. 300 Bio. 200 Bio. 200	All Instruc- tors
—106	4	Tu., Th., at 1 Lab., Tu., Th., 2 to 4	Bio. 201-8	Bleile, Seymour, Durrant
107—	3	M., W., F., at 9	Bio. 101	Durrant
109—110	3	To be arranged	Bio.	Bleile, Seymour, Durrant
111—112	5	To be arranged	Bio.	Bleile, Seymour, Durrant
114—	4	Tu., Th., at 1 Lab., Tu., Th., 2 to 4	Bio. 100 Bio.	
115—	3	M., F., at 11 Lab. to be arranged	Bio. 200 Bio.	Bleile
—118	3	M., F., at 11 Lab. to be arranged	Bio. 200	Durrant
119—120	3	M., W., F., at 2	Bio. 100	Bleile
121—122	5	To be arranged	Bio.	Brooks
123—	4	To be arranged	Bio.	Brooks, Seymour
—130	4	To be arranged	Bio.	McPeck
—132	3	For Pre-Medics		

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 1	Bio. 101	Bleile
		M., W., F., at 3	Bio. 101	
		Tu., Th., S., at 9	Bio. 101	
137—138	1	Tu., 10 to 12	Bio.	
201—202	3	To be arranged	Bio.	Bleile
203—204	5 to 10	To be arranged	Bio.	

POLITICAL SCIENCE

101—102	3	L., Tu., Th., at 9	H. F. 206	Spencer, Coker
		M., W., at 2	H. F. 206	Spencer, Coker
		Q., F., at 11, 1, 2, 3	Ha. 205	Spencer, Coker
		S., at 8, 9, 10, 11	Ha. 207	Spencer, Coker
—101	3	M., W., F., at 3	Ha. 101	Coker
106—	3	M., W., F., at 10	Ha. 207	Spencer
113—114	2	Tu., Th., at 3	Ha. 207	Spencer
115—116	2	Tu., Th., at 10	Ha. 207	Coker
117—118	2	Tu., 4 to 6	Ha. 207	Coker
125—126	3	M., W., F., at 8	Ha. 207	Spencer
—130	3	M., W., F., at 10	Ha. 207	Coker
131—132	2	Tu., Th., at 9	Ha. 207	Coker
201—202	2	M., 4 to 6	Ha. 207	Spencer

PRINCIPLES AND PRACTICE OF EDUCATION

101—	3	M., W., F., at 10	Ha. 208	Clifton
		M., W., F., at 2	Ha. 208	Clifton
—101	3	M., W., F., at 2	Ha. 208	
104—104	3	Two consecutive hours daily; to be arranged		
107—107	8	M., W., F., at 3	Ha. 207	Clifton
111—112	3	To be arranged		

PSYCHOLOGY

101—102	3	M., W., F., at 8	U. 401	All Instruc-
		M., W., F., at 8	U. 412	tors
		Tu., Th., S., at 8	U. 400	
		M., W., F., at 9	U. 412	
		M., W., F., at 9	U. 406	
		Tu., Th., S., at 9	U. 400	
		M., W., F., at 10	U. 400	
		M., W., F., at 10	U. 401	

PSYCHOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		M., W., F., at 10	U. 406	
		Tu., Th., S., at 10 (Pre-Med.)	U. 400	
		M., Tu., F., at 11 (Pre-Med.)	U. 400	
		M., W., F., at 12	U. 400	
		M., W., F., at 1	U. 400	
		M., W., F., at 1	U. 412	
		M., W., F., at 1	U. 406	
		M., W., F., at 2	U. 406	
		M., W., F., at 2 (Pre-Med.)	U. 412	
		M., W., F., at 2	U. 400	
		M., W., F., at 3	U. 406	
		M., W., F., at 3	U. 401	
		M., W., F., at 4	U. 412	
102—101	3	M., W., F., at 9	U. 400	
		M., W., F., at 3	U. 400	
		M., W., F., at 3	U. 412	
103—104	3	Tu., Th., at 9	U. 415	Weiss
		Lab., W., 1 to 3		
107—108	2	M., F., at 11	U. 401	Pintner
		Tu., Th., at 9	U. 412	Coy
		Tu., Th., at 10	U. 406	Coy
		Tu., Th., at 4	U. 401	Coy
108—107	2	Tu., Th., at 3	U. 401	Coy
111—112	3	Tu., at 1	U. 415	Weiss
		Lab., Tu., 2 to 4; Th., 1 to 3		
—114	2	Tu., Th., at 10	U. 412	Burt
115—116	2	Tu., Th., at 10	U. 401	Rogers
118—	2	Tu., Th., at 10	U. 415	Weiss
119—	2	Tu., Th., at 10	U. 412	Burt
121—122	4	M., W., F., at 9; S., 9 to 11	U. 401	Bridges, Pintner
—124	2	Tu., Th., at 9	U. 406	Bridges
125—126	3	M., W., F., at 10	U. 412	Arps
—127	2	M., F., at 11	U. 406	Burt
128—	2	M., F., at 11	U. 406	Crane
129—	2	M., F., at 11	U. 412	Arps, Culler
131—	2	Tu., Th., 3 to 5	U. 406	Crane
133—134	3	M., W., F., 1 to 3	U. 408	Pintner
—138	2	M., F., at 11	U. 412	Arps, Culler
139—140	2	To be arranged	U. 401	Burt
141—142	2 to 4	To be arranged		
147—148	1 or 2	To be arranged	U. 408	Pintner
149—150	2	Tu., Th., at 1	U. 406	Crane
151—152	2	Tu., Th., at 2	U. 406	Crane
201—202	3 or more	To be arranged		
203—204	2	M., 7 to 9 P. M.	L. 309	Arps, Bridges
205—206	1	M., at 3	U. 415	Weiss, Pintner

PUBLIC HEALTH AND SANITATION

PUBLIC HEALTH

Course No.	Hours	Time	Room	Instructor
101—	2	To be arranged		McC Campbell
103—104	2	To be arranged		
105—106	2	To be arranged		
107—108	3	To be arranged		
—110	2	To be arranged		McC Campbell
—112	3	Tu., Th., 8 to 9:30	Med. 400	Hayhurst
113—	2	Tu., Th., at 11	Bio. 101	Hayhurst
115—	2	M., at 2; Tu., at 8	Med. 312	McC Campbell
121—	2	Tu., Th., at 10	Bio. 101	Hayhurst
—121	2	Tu., Th., at 11	Bio. 200	Hayhurst
—122	2	Tu., Th., at 10	Bio. 200	Hayhurst
—124	2	To be arranged		Hayhurst
201—202	3	To be arranged		Hayhurst
—204	2	To be arranged		McC Campbell
205—	2	To be arranged		
207—208	2	To be arranged		
209—210	3	To be arranged		McC Campbell
211—212	3	To be arranged		Van Buskirk
213—214	3	To be arranged		Van Buskirk
—216	1	To be arranged		McC Campbell

SCIENCE NURSING

—106	2	To be arranged
—110	2	To be arranged
111—	2	To be arranged
113—	2	To be arranged
115—	1	To be arranged
117—	1	To be arranged
119—	10	To be arranged
—122	2	To be arranged
—124	2	To be arranged
125—	1	To be arranged
127—	1	To be arranged
129—	2	To be arranged
131—	2	To be arranged
133—	2	To be arranged
135—	1	To be arranged
137—	1	To be arranged
139—	6	To be arranged

PUBLIC SPEAKING

101—102	2	Tu., Th., at 8	Ph. 304	Ketcham
		Tu., Th., at 8	Ph. 302	Wiley
		Tu., Th., at 10	Ph. 304	Ketcham
		Tu., Th., at 10	Li. 307	Wiley
		M., W., at 1	Ph. 304	Wiley

PUBLIC SPEAKING—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., Th., at 1	Ph. 304	Ketcham
		Tu., Th., at 1	Ph. 302	Wiley
		Tu., Th., at 2	Ph. 302	Wiley
101—	2	Tu., Th., at 9	Ph. 302	Wiley
107—108	3	M., at 3; W., 3 to 5	Ph. 304	Ketcham
—110	2	To be arranged		Ketcham
—114	2	M., W., at 10	Ph. 302	Wiley
125—126	2	Tu., Th., at 9	Ph. 304	Ketcham
151—152	2	Tu., Th., at 2	Ph. 304	Ketcham

ROMANCE LANGUAGES

FRENCH

101—102	4	M., W., F., S., at 8	Ha. 200, 208	All Instructors
		M., W., F., S., at 8	Ha. 106	
		M., W., F., S., at 9	Ha. 200, Ha. 211	
		M., W., F., S., at 9	H. F. 203	
		M., W., F., S., at 10	Ha. 211, H. F. 108	
		M., W., F., S., at 10	H. F. 204	
		M., Tu., F., S., at 11	Ha. 212	
		M., Tu., W., Th., at 12	Ha. 211	
		M., Tu., W., Th., at 1	Ha. 211, H. F. 107	
		M., Tu., W., Th., at 1	Ha. 106	
		M., Tu., W., Th., at 2	Ha. 211, H. F. 204	
		M., Tu., W., Th., at 2	Ha. 106	
		M., Tu., W., Th., at 3	Ha. 211, H. F. 204	
		M., Tu., W., Th., at 3	Ha. 106	
		M., Tu., W., Th., at 4	Ha. 211	
		M., Tu., W., Th., at 4	Ha. 106	
—101	4	M., Tu., W., Th., at 3	Ha. 210	
102—103	4	M., Tu., W., Th., at 3	Ha. 200	
		M., W., F., S., at 10	Ha. 106	
103—104	4	M., W., F., S., at 8	Ha. 205, H. F. 107	All Instructors
		M., W., F., S., at 9	Ha. 205, H. F. 108	
		M., W., F., S., at 10	H. F. 203, H. E. 321	
		M., Tu., W., Th., at 1	Ha. 205, H. F. 108	
		M., Tu., W., Th., at 2	H. F. 113	
		M., Tu., W., Th., at 3	Ha. 205, H. F. 203	
		M., Tu., W., Th., at 4	Ha. 205	
104—	4	M., Tu., W., Th., at 3	H. F. 108	
—106	4	M., W., F., S., at 10	Ha. 205	
109—110	3	M., W., F., at 9	Ha. 208	Rockwood
		M., Th., F., at 11	Ha. 208	Rockwood
111—112	2	Tu., Th., at 10	Ha. 208	Hacker
113—	2	Tu., Th., at 11	Ha. 200	
119—120	2	W., 3 to 5	Ha. 215	Hacker

ROMANCE LANGUAGES—Continued

Course No.	Hours	Time	Room	Instructor
—122	2	W., 2 to 4	Ha. 216	Bowen
123—124	2	Tu., Th., at 9	Ha. 200	Hacker
125—126	2	Tu., Th., at 9	Ha. 205	Rockwood
131—132	2	Tu., Th., at 9	Ha. 208	
		Tu., Th., at 2	Ha. 207	

ITALIAN

101—102	4	M., W., F., S., at 10	Ha. 216	Williams
103—104	2	Tu., Th., at 2	Ha. 216	Williams

SPANISH

101—102	4	M., W., F., S., at 8	Ha.210, H.F.108	All Instruc- tors
		M., W., F., S., at 8	H. F. 203	
		M., W., F., S., at 9	Ha.210, H.F.204	
		M., W., F., S., at 9	H. F. 107	
		M., W., F., S., at 10	Ha. 210	
		M., W., F., S., at 10	H. F. 107	
		M., Tu., F., S., at 11	Ha. 210	
		M., Tu., W., Th., at 12	Ha. 210	
		M., Tu., W., Th., at 1	Ha.210, H.F.204	
		M., Tu., W., Th., at 1	Ha. 200	
		M., Tu., W., Th., at 2	Ha. 205, Lo. 107	
		M., Tu., W., Th., at 2	H. F. 107	
		M., Tu., W., Th., at 3	Ha.210, H.F.107	
		M., Tu., W., Th., at 4	Ha. 210	
—101	4	M., Tu., W., Th., at 1	Ha. 208	
102—103	4	M., W., F., S., at 9	Ha. 212	
		M., Tu., W., Th., at 2	Ha. 212	
103—104	4	M., W., F., S., at 10	Ha. 212, Br. 1	
		M., Tu., W., Th., at 1	Ha. 212, H.F. 203	
		M., Tu., W., Th., at 4	Ha. 212	
103—110	4	M., W., F., S., at 8	Ha. 212, H.F. 204	
		M., Tu., W., Th., at 2	H. F. 203	
105—106	3	M., Th., F., at 11	Ha. 207	Ingraham
107—108	2	Tu., Th., at 1	Ha. 207	Ingraham
111—	2	Tu., Th., at 3	Ha. 208	Ingraham
113—114	3	M., W., F., at 4	Ha. 216	Gutierrez

GRADUATE COURSES

Romance Languages

205—206	2	W., 3 to 5	L. 311	Havens
209—210	2 to 3	F., 2 to 4	L. 311	Ingraham
211—212	2	To be arranged		Ingraham
213—	2	To be arranged		Hamilton
217—218	2	Tu., 3 to 5	L. 311	Havens

SCHOOL ADMINISTRATION

Course No.	Hours	Time	Room	Instructor
101—101	3	M., W., F., at 9	Ha. 101	Brown
		M., W., F., at 4	Ha. 200	McCracken
103—104	2	Tu., Th., at 2	Ha. 208	McCracken
105—105	2	S., 10 to 12	Ha. 208	Brown
111—112	3	M., W., F., at 3	Ha. 208	Brown
113—114	3	M., W., F., at 2	Ha. 101	McCracken
115—	2	Tu., Th., at 3	Ha. 208	Brown
—116	3	M., W., F., at 10	Ha. 200	Brown
117—118	2	S., 10 to 12	Ha. 200	McCracken, Brown
—122	3	M., W., F., at 4	Ha. 208	Brown
133—134	3	M., Th., F., at 2	Ha. 200	Brown
201—202	2 to 5	To be arranged		Brown, McCracken

SHOPWORK

101—103	2	M., at 10; F., 1 to 4	S.	Denman
		M., at 2; M., 8 to 11	S.	Senn,
		M., at 3; Tu., 8 to 11	S.	Foust,
		M., at 2; W., 8 to 11	S.	Wright
		Tu., at 8; Tu., 1 to 4	S.	
101—	2	Th., at 3; Th., 8 to 11	S.	
—101	2	W., at 3; W., 8 to 11	S.	
103—101	2	M., at 10; F., 1 to 4	S.	Foust,
		M., at 3; Tu., 8 to 11	S.	Wright,
		W., at 10; S., 8 to 11	S.	Denman,
		F., at 9; Tu., 1 to 4	S.	Senn
		F., at 1; M., 8 to 11	S.	
103—	2	Th., at 1; W., 8 to 11	S.	
—103	2	M., at 10;; W., 1 to 4	S.	
105—	2	Tu., at 8; Tu., 1 to 5	S.	Breckur
		Tu., at 8; W., 1 to 5	S.	
		Th., at 1; S., 8 to 12	S.	
		F., at 2; M., 8 to 12	S.	
—105	2	M., 1 to 4; Tu., 1 to 3	S.	
		F., at 1;; S., 8 to 12	S.	
107—	2	M., 8 to 10; Tu., 8 to 11	S.	Wright
		M., 1 to 3; Tu., 1 to 4	S.	
		W., 8 to 10; Th., 8 to 11	S.	
		W., 1 to 3; S., 8 to 11	S.	
—107	2	W., 1 to 4; Th., 1 to 4	S.	Wright
109—109	2	M., 1 to 4; Tu., 1 to 3	S.	Beem
		W., 1 to 3; Th., 1 to 4	S.	
		F., 8 to 10; S., 8 to 11	S.	Beem
—109	2	M., 8 to 10; Tu., 8 to 11	S.	Beem
111—	1	Tu., 8 to 11	S.	
		W., 8 to 11	S.	Beem

SHOPWORK—Continued

Course No.	Hours	Time	Room	Instructor
111—111	1	Th., 1 to 4	S.	
		F., 1 to 4	S.	Beem
115—	2	M., 1 to 3; Tu., 1 to 4	S.	Foust,
115—115	2	W., 1 to 3; Th., 1 to 4	S.	Wright
—115	2	W., 8 to 10; Th., 8 to 11	S.	
—118	2	To be arranged	S.	Foust,
				Wright
119—	3	M., Tu., 8 to 11	S.	Wright
		W., Th., 8 to 11	S.	Wright
		F., 1 to 4; S., 9 to 12	S.	Wright
—119	3	M., Tu., 8 to 11	S.	Wright
		W., Th., 8 to 11	S.	
121—	3	M., Tu., 1 to 4	S.	Knight
				Wright
		W., Th., 1 to 4	S.	Knight
				Wright
—121	3	M., Tu., 1 to 4	S.	Knight
				Wright
		W., Th., 1 to 4	S.	Knight
				Wright
		F., S., 8 to 11	S.	Knight
				Wright
123—	2	To be arranged	S.	Knight
				Wright
125—125	2	To be arranged	S.	Knight
				Wright
127—127	3	To be arranged	S.	Knight
201—202	5 to 10	To be arranged	S.	Knight

For Short Courses Only

51— 51	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.
52— 52	2	M., at 1; W., 8 to 11	S.
		F., at 11; F., 8 to 11	S.
		W., at 1; W., 2 to 5	S.
		M., at 1; M., 2 to 5	S.

SURVEY OF EDUCATION

1 To be arranged

The Dean

ZOOLOGY AND ENTOMOLOGY

ZOOLOGY

Course No.	Hours	Time	Room	Instructor
101—102	3	L., Tu., Th., at 8	B. Z. 109, 209	All Instructors
		Tu., Th., at 9	B. Z. 109, 209	
		Tu., Th., at 10	B. Z. 109, 209	
		Tu., Th., at 1	B. Z. 109, 209	
		Tu., Th., at 2	B. Z. 109, 209	
		Tu., Th., at 3	B. Z. 109, 209	
		Lab., M., 1 to 3	B. Z. 65, 69	
		W., 8 to 10	B. Z. 65, 69	
		W., 1 to 3	B. Z. 65, 69	
		Th., 8 to 10		
		Th., 1 to 3		
		F., 8 to 10	B. Z. 65, 69	
		F., 1 to 3	B. Z. 65, 69	
		S., 8 to 10		
		Pre-Medics and Dentistry		
		M., W., at 10	B. Z. 100	
		M., 8 to 10	B. Z. 65, 69	
		M., at 9; W., at 10	B. Z. 100	
		M., 10 to 12	B. Z. 65, 69	
—101	3	M., W., at 2; M., 8 to 10	B. Z. 100, 65	Barrows
115—	3	M., W., F., at 10	B. Z. 208	
—115	3	M., W., F., at 10	B. Z. 100	
—118	3	W., F., at 8; F., 1 to 3	B. Z. 211	
121—122	3	L., Tu., at 1	B. Z. 111	Kostir
		Lab., Tu., 2 to 4; Th., 1 to 3		
123—	2	To be arranged	B. Z.	Kostir
—124	2	To be arranged	B. Z.	Osburn
				Kostir
129—	3	M., Th., at 11	B. Z. 209	Barrows
—130	3	M., Th., at 11	B. Z. 209	Barrows
131—132	3	M., Th., F., at 11	B. Z. 109	Osburn
139—140	2	M., at 10; Tu., 1 to 4	B. Z.	Hine
141—142	3 to 5	To be arranged	B. Z.	
145—	3	To be arranged	B. Z.	Barrows
159—	3	L., W., F., at 8	B. Z. 209	Krecker
		Lab., F., 1 to 4		
201—202	1	To be arranged	B. Z.	Osburn
223—224	3 to 5	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	
247—248	5	To be arranged	B. Z.	Osburn

ENTOMOLOGY

107—107	3	L., M., W., at 8	B. Z. 109	Metcalf
		M., W., at 1	B. Z. 209	Metcalf
		Lab., Tu., 8 to 10	B. Z. 65, 69	Metcalf

ZOOLOGY AND ENTOMOLOGY—Continued

Course No.	Hours	Time	Room	Instructor
		Tu., 1 to 3	B. Z. 65, 69	Metcalf
—112	3	Tu., Th., at 8	B. Z. 211	Hine
		Lab., Th., 1 to 4	B. Z.	
		S., 8 to 11		
113—114	4	Tu., Th., at 10	B. Z.	Kennedy
		Lab., Tu., Th., 2 to 5	B. Z. 107	
137—138	3 to 5	M., W., at 10	B. Z.	Metcalf
		Lab., M., W., F., 1 to 4		
141—142	3 to 5	To be arranged	B. Z.	
147—	2	Tu., Th., at 10	B. Z. 211	Hine
—148	2	M., W., at 9	B. Z.	Osburn
149—150	3 to 5	M., F., at 11	B. Z. 211	Metcalf
		Lab., F., 8 to 11		
151—152	3	Th., at 11	B. Z. 211	Metcalf
		Lab., Tu., Th., 1 to 4		
155—156	3	M., W., F., at 9	B. Z. 211	Hine
—162	4	M., F., at 11	B. Z.	
		Lab. to be arranged		
201—202	1	To be arranged	B. Z.	Osburn
241—242	5 to 10	To be arranged	B. Z.	

For Short Courses Only

51— 52	4	M., W., Th., F., at 2	B. Z. 211	Hine
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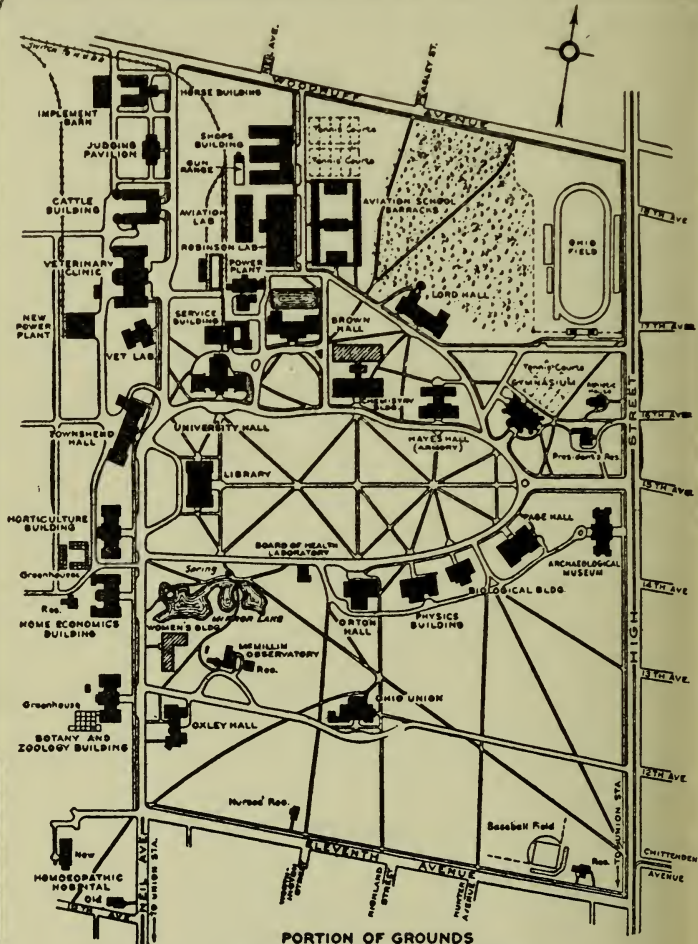
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EDUCATION

1921-1922

PUBLISHED BY THE UNIVERSITY AT COLUMBUS

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PORTION OF GROUNDS THE OHIO STATE UNIVERSITY

LEGEND



Proposed buildings
provided for by State
Legislature.

Scale of Feet

100 0 100 200 300 400 500 600 700 800

1918

UNIVERSITY CALENDAR

1921

Summer Session, Monday, June 20 to Friday, August 12.
Entrance examinations, Tuesday to Saturday, 8 A. M., June 21 to 25.
Entrance examinations, Tuesday to Saturday, 8 A. M., September 6 to 10.
Physical examinations for all new students, Friday to Friday, September 16 to 23.
Registration Day—First Semester—Tuesday, September 20.
President's Annual Address, Wednesday, September 21, 11 A. M.
Intelligence tests for Freshmen in the Engineering College, Thursday and Friday, September 22 and 23, from 10 to 12 A. M.
Intelligence tests for all new students, Saturday, September 24.
Latest date for registration of candidates for a degree at the Commencement in June, 1922, October 1.
Registration Day, Short Courses in Agriculture—First Term—Tuesday, October 18.
Mid-semester reports to the Deans concerning delinquent students, Wednesday, November 9.
Thanksgiving recess begins November 23, 1 P. M., and ends November 29, 8 A. M.
Christmas recess begins Thursday, December 22, 6 P. M.

1922

Christmas recess ends Tuesday, January 3, 8 A. M.
Registration Day, Short Courses in Agriculture—Second Term—Tuesday, January 3.
Final examinations, Wednesday, January 25 to Thursday, February 2.
Farmers' Week, Monday, January 30 to Friday, February 3.
First semester ends Thursday, February 2, 6 P. M.

SECOND SEMESTER

Registration Day—Second Semester—Tuesday, February 7.
University Day, Wednesday, February 22.
Close of Second Term, Short Courses in Agriculture, Friday, March 17.
Mid-semester reports to the Deans, Wednesday, April 5.
Easter recess, Thursday noon, April 13 to Tuesday, April 18, 8 A. M.
Competitive Drill—Cadet Regiment—Saturday, May 27.
Memorial Day, Tuesday, May 30.
Final examinations, Wednesday, May 31 to Thursday, June 8.
Commencement, Tuesday, June 13.
Summer Session, Monday, June 19 to Friday, August 11.
Entrance examinations, Tuesday, June 20 to Saturday, June 24, 8 A. M.

THE FRANKLIN CO. CHS.

CALENDAR FOR 1921

JANUARY.							FEBRUARY.							MARCH.							APRIL.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	27	28	29	30	31	24	25	26	27	28	29	30
30	31
MAY.							JUNE.							JULY.							AUGUST.						
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
29	30	31	.....	.....	.....	.....	26	27	28	29	30	.....	.....	24	25	26	27	28	29	30	28	29	30	31	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SEPTEMBER.							OCTOBER.							NOVEMBER.							DECEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
25	26	27	28	29	30	.....	23	24	25	26	27	28	29	27	28	29	30	.....	.....	.....	25	26	27	28	29	30	31
.....	.....	.....	.....	.....	.....	.....	30	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

THE FRANKLIN CO. CHS.

CALENDAR FOR 1922

JANUARY.							FEBRUARY.							MARCH.							APRIL.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31	26	27	28	26	27	28	29	30	31	23	24	25	26	27	28	29
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MAY.							JUNE.							JULY.							AUGUST.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
28	29	30	31	.....	.....	.....	25	26	27	28	29	30	.....	23	24	25	26	27	28	29	27	28	29	30	31	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SEPTEMBER.							OCTOBER.							NOVEMBER.							DECEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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17	18	19	20	21	22	23	15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
24	25	26	27	28	29	30	22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
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ADMINISTRATION

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JOHN KAISER, Vice-Chairman.....	Marietta
CHARLES F. KETTERING.....	Dayton
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BENJAMIN F. MCCANN.....	Dayton

ADMINISTRATIVE OFFICERS

President.....WILLIAM OXLEY THOMPSON
Office: University Hall—99312; N. 476
Residence: University Grounds—2056

Secretary of the Board of Trustees and Business Manager
.....CARL E. STEEB
Office: University Hall (East End)—99332; N. 32
Residence: 1956 Iuka Ave.—5835

Registrar, University Editor and Secretary of the University Faculty.....EDITH D. COCKINS
Office: 100 University Hall—99314
Residence: 1348 Neil Ave.—16310

University Examiner.....BLAND L. STRADLEY
Office: 107 University Hall—99353; N. 939
Residence: 1778 N. High St.—11229

Executive Clerk.....KATHERINE A. VOGEL
Office: University Hall—99312; N. 476
Residence: 209 S. Monroe Ave.—E. 2356

Comptroller.....CHARLES A. KUNTZ
Office: University Hall (East End)—99332; N. 32
Residence: 2087 Peasley St.—N. 5118

Cashier (Acting).....FLORIS D. HANE
Office: University Hall (East End)—99332; N. 32
Residence: 1755 N. Fourth St.—11954

Dean of Women.....ELISABETH CONRAD
Office: 201 Home Economics Building—99367; N. 5876
Residence: 1981 Indianola Ave.—11252

COLLEGE OF EDUCATION

Dean.....GEORGE F. ARPS
Office: 211 University Hall—99375
Residence: 216 E. Lane Ave.—11303

Secretary.....CLARENCE E. ERFFMEYER
Office: 211 University Hall—99375
Residence: 1920 N. High St.—11265

THE OHIO STATE UNIVERSITY

The Ohio State University is a part of the educational facilities maintained by the State and is located in the northern part of the City of Columbus.

ORGANIZATION

For convenience of administration, the departments of the University are grouped into organizations called Colleges. The Ohio State University comprises a Graduate School and eleven Colleges, each under the administration of a Dean and College Faculty, as follows:

Graduate School	College of Education
College of Agriculture	College of Engineering
College of Arts, Philosophy, and Science	College of Homoeopathic Medicine
College of Commerce and Journalism	College of Law
College of Dentistry	College of Medicine
	College of Pharmacy
	College of Veterinary Medicine

SUMMER SESSION

In addition to the above, there is a Summer Session under the supervision of a governing committee for the administration of the regular University courses offered in the summer.

This Bulletin is devoted exclusively to the work of the College of Education for the academic year, 1921-1922.

(NOTE—The University publishes a bulletin descriptive of each college. Copies may be obtained by addressing the University Examiner, The Ohio State University, Columbus, Ohio, and stating the college in which the writer is interested.)

COLLEGE OF EDUCATION

This College was established by the University for the professional training of teachers, as provided in the school laws of this State. It offers practical and theoretical courses for the training of high school teachers and principals, of principals of elementary schools, of supervisors of special studies, of superintendents of school systems, of county and district superintendents, and of instructors in normal schools. Its purpose is to assist the student in the acquirement of a knowledge of the branches which he wishes to teach, to give him a right attitude toward education, and to establish in him a skill in the use of efficient methods of teaching and of supervision.

The effort of the College is to bring into proper adjustment within the limits of a four-year course the academic training, the theoretical professional training, and the practical professional training necessary for a proficient teacher. The completion of the requirements in this College leads to the degree, Bachelor of Science in Education.

DEPARTMENTS

The College of Education includes work in the following departments offering general and professional training for teachers: Psychology, History of Education, School Administration, Principles and Practice of Education, Art, Industrial Education, Home Economics, Agricultural Chemistry, American History, Anatomy, Bacteriology, Botany, Chemistry, Economics and Sociology, English, European History, Geology, German, Greek, Latin, Mathematics, Military Science and Tactics, Philosophy, Physical Education, Physics, Physiology, Political Science, Romance Languages, Zoology and Entomology.

PHYSICAL EDUCATION

Provision has been made by the College of Education to meet the demand in the public schools for directors and teachers of physical education, and for athletic coaching. Regular students in the College preparing for high school teaching may include

in their curriculum Physical Education as a "minor subject" and receive credit for it towards their degree. The minor consists of twelve semester hours in addition to the courses required of first and second year students. In each case the approval of the Head of the Department of Physical Education and of the Dean of the College must be obtained.

For further details see the courses as announced on page 95.

GRADUATE COURSES

The graduate instruction offered by the departments represented in this Bulletin is given in the Graduate School. A special bulletin describing the organization, admission requirements, and work of the Graduate School may be obtained on application to the Entrance Board.

SUMMER SESSION

The University maintains a summer session for eight weeks, in which most of the courses offered are credited by this College.

Two summer sessions are considered the equivalent of one semester and four summer sessions the equivalent of the year.

RESIDENCE REQUIREMENT

No undergraduate will be admitted to candidacy for a degree at any Commencement who has not done the last year of work required for the degree in residence in this College. No student will be registered in such candidacy later than the first day of October.

TEACHERS' CERTIFICATES

All graduates of the College of Education are entitled, under the law, to a state provisional high school teachers' certificate, without examination. This certificate, obtainable from the State Superintendent of Public Instruction on the payment of a fee of one dollar, is valid in the State of Ohio for four years and the holder is eligible for appointment as teacher in any high school in the State, without further examination.

Graduates from this College in Home Economics, in Industrial Education, or in Art are also entitled, without further examination, to a state provisional special certificate valid for four

years, in the appropriate one of the above lines. The holder of such special certificate is eligible for appointment as teacher or supervisor in the particular subject covered by the certificate.

The holder of any of these provisional certificates, furnishing evidence that he has completed at least twenty-four months of successful teaching during the four years, will be granted a state life certificate, of corresponding character, by the State Board of School Examiners.

PROFESSIONAL SUBJECTS

Pursuant to the present School Code of Ohio the State Superintendent of Public Instruction has designated the subjects which are accepted and treated as professional subjects in the training of teachers and which must be included within the minimum of thirty semester hours required of all applicants for state high school provisional or life certificates.

The subjects are General Psychology, Educational Psychology, History of Education, Principles of Education (or Science of Education), School Administration, Methods of Teaching, either general or special, and Supervised Practice Teaching.

Work in each of the foregoing subjects is absolutely required of all applicants for such certificates. In addition to the above, under certain conditions Experimental Psychology, Sociology and Philosophy may be counted, if needed, to make up the necessary thirty hours.

The various curricula in the College of Education include all of the subjects necessary to meet the foregoing provisions.

GENERAL INFORMATION

RESERVE OFFICERS' TRAINING CORPS

Under the law of Congress establishing the land grant colleges, it is required that instruction in Military Science and Tactics be included in the curricula. This instruction is given under the Defense Act of June 3, 1916, establishing in the University the Reserve Officers' Training Corps. Under normal conditions, eight commissioned officers, three warrant officers, and eleven non-commissioned officers of the Regular Army are detailed by the War Department to take charge of this department. The Board of Trustees has directed that all male students, special and regular, except those registered in the Colleges of Law, Medicine, Homoeopathic Medicine, and Dentistry, shall complete two years of military service unless especially excused by the Military and Gymnasium Board.

Self-support is not an adequate reason for excusing a student from the requirement in Military Science.

The Reserve Officers' Training Corps is organized as a brigade consisting of two regiments of Infantry, each composed of three battalions of four companies each, and one regiment of Field Artillery, composed of two battalions of three batteries each, a band of sixty pieces, and a trumpet corps. There are two companies of men from the students in the Three-Year Course in Agriculture. The total number of men under arms averages about three thousand.

The course of instruction is both practical and theoretical, and divided into basic and advanced courses in both Infantry and Field Artillery. One-half of the time is devoted to theoretical work in the classroom and one-half of the time to practical work in the field. The basic courses are required of all Freshmen and Sophomores. The advanced courses are elective for Juniors and Seniors. Students completing the advanced course when recommended by the Commandant and the President of the University, are granted a commission as Second Lieutenant in the Officers' Reserve Corps by appointment from the President of the United States. No student is eligible for the ad-

vanced course until he has satisfactorily completed the basic course or its equivalent.

The allowance made by the War Department is nearly sufficient to pay for the cadet uniform. This University has adopted its own style of uniform. Students taking advanced courses in Military Science also receive fifty-three cents a day, payable quarterly.

The appointment of cadet officers is made usually from those who have served in the Military Department at least one year and as a reward for excellence in their work. No compensation is paid to officers who are completing their first two years of service in the Military Department, the only exception being those who have had the equivalent of the required two years in service elsewhere. The compensation awarded at the end of each year of satisfactory service is thirty dollars for lieutenants, forty dollars for captains, and proportional sums for officers of higher rank.

Service in the band is credited as military service, the positions being assigned after competitive try-out. Members of the band who have completed two years of service in the Military Department or its equivalent are paid at the rate of twenty dollars a year and receive instruction during the four winter months from a competent bandmaster.

THE APPOINTMENT COMMITTEE

In order to serve the schools of the State, the Faculty has provided a Committee, one of the duties of which is to assist graduates of the University to teaching positions for which they are best fitted. Any student of the University intending to teach is invited to enroll his name with the Committee on a blank provided for that purpose. Blanks may be obtained from the Chairman, Mr. J. L. Clifton, Room 211, University Hall. Graduates of the University who are already engaged in teaching are also cordially invited to correspond with the Appointment Committee with a view to bettering their positions. Correspondence is invited from Boards of Education and from Superintendents and Principals of schools in need of teachers. No fee is charged for the services of the Committee.

THE BRYAN PRIZE

Through the generosity of Hon. William J. Bryan an annual prize of forty-five dollars is offered for the best essay on the principles underlying the form of government of the United States. Competition for this prize is open to all students of the University. For further information, make inquiry of the Head of the Department of American History.

FEES AND EXPENSES

GENERAL CHARGES

All University fees must be paid at the opening of each semester as a condition of admission to classes. Registration is not complete until all fees have been paid. No student will have any privileges in the classes or laboratories until all fees and deposits are paid.

Since all fees are due and payable as a part of the student's registration, no person should come to the University for registration without money sufficient to cover all of his fees and deposits.

Matriculation Fee. Every student upon his first admission to the University is required to pay a matriculation fee of \$10.00. This fee is paid but once, and is in addition to other University fees and entitles the student to the privileges of membership in the University.

Non-Resident Fee. Every undergraduate student who is not a legal resident of the State of Ohio is required to pay a non-resident fee of \$50.00 each semester of his residence in the University in addition to other University fees. The burden of registering under proper residence is placed upon the student. If there is any possible question of his right to legal residence the matter should be brought to the attention of the Registrar and passed upon, previous to registration or the payment of fees. Any student who registers improperly under this rule shall be required to pay not only the non-resident fee but shall be assessed a penalty of \$10.00.

No person shall be considered eligible to register in the University as a resident of the State of Ohio unless he has resided

in the State twelve months next preceding the date of his proposed enrollment; and no person shall be considered to have gained a residence in this State for the purpose of registering in the University while he is a student in the University.

The residence of minors shall follow that of the legal guardian.

The residence of wives shall follow that of husbands.

Aliens who have taken out first citizenship papers and who have been residents of Ohio for twelve months next preceding the date of their enrollment in the University, shall be regarded as eligible for registration as residents of Ohio.

Incidental Fee. The fee for all students is twenty dollars a semester.

Former students who do not pay this fee until the third day of the first semester and the second day of the second semester must pay one dollar additional. For each day of delinquency thereafter fifty cents is added.

Laboratory Deposit. Students are required to pay for all materials consumed in laboratory work. To meet the cost of these materials a deposit ranging from two to fifteen dollars for each course requiring such supplies is made at the Bursar's office before the student can enter the laboratory. All laboratory supplies are sold at the General Store Room, Chemistry Building, to students at cost to the University, and charged against the deposit. Any unused part of the deposit is refunded at the end of the semester.

Deposit for Uniform. The allowance made by the War Department is nearly sufficient to pay for the cadet uniform. Every student in the Military Department is required to make a deposit during his first year of residence of not to exceed thirty dollars for his uniform. If for any reason he is obliged to leave the University before the close of the academic year, such portion of the deposit that is due the student through attendance will be refunded to him. This refund is at the rate of four dollars for each month that he is in residence at the University and in attendance in the Military Department. If the student remains in attendance during the entire year his full deposit is refunded to him and the uniform becomes his property, free of charge.

OTHER EXPENSES

Locker Fee. The gymnasium is free to all students, but those desiring to use a locker are charged a fee of two dollars a semester, which includes the rental of towels.

The Ohio Union. A fee of one dollar a semester is paid by all male students at registration. This entitles the student to all the privileges of the Union, consistent with the Constitution and House Rules governing it.

Graduation Fee. A fee of five dollars, to cover expense of graduation and diploma, is required of each person receiving one of the ordinary degrees from the University, and this fee must be paid on or before the last Wednesday preceding Commencement. A like fee of ten dollars is charged each person receiving one of the higher graduate degrees.

Textbooks. Students should not purchase textbooks until they are advised by the instructors of their respective classes.

COST OF A YEAR'S WORK

One of the most perplexing questions that confronts a prospective student is what the course is going to cost him a year.

In order to furnish information, we have made an estimate of the cost of the Freshman year based upon the general course, including room and boarding at a safe price. These two items are sometimes reduced slightly where two students occupy the same room and where boarding clubs are economically managed. Fees to the University are paid one-half at the beginning of each semester.

Matriculation fee	\$ 10 00
Incidental fee	40 00
Ohio Union	2 00
Gymnasium locker	4 00
Deposits to cover laboratory materials and breakage, if Chemistry is elected.....	30 00
Deposit for uniform.....	30 00
Books	30 00
Board—36 weeks at \$8.00 a week.....	288 00
Room rent, at \$15.00 a month.....	135 00
General expenses	100 00
	<hr/>
	\$669 00

The item of *general expenses* is always subject to the personal habits of the individual and varies according to the degree of economy exercised.

(NOTE: In order to meet all the necessary expenses of registration, deposit for uniform, books, and other expenditures incident to securing a room and board, a student should come prepared to expend from one hundred to one hundred and twenty-five dollars during the first ten days of a semester. After that period his board and room rent will constitute the major part of his expenses.)

WOMEN STUDENTS

The Ohio State University is open to women upon the same conditions and by the same methods of registration offered to men. Within twenty-four hours after formal registration, every young woman must also register with the Dean of Women at her office in the Home Economics Building.

LIVING ARRANGEMENTS FOR WOMEN

It is recommended that women students arrange for a regular boarding place and be dependent neither upon the restaurants in the vicinity nor upon the cooking of their own meals. A list of approved houses for women with some indication of the character and price of rooms may be obtained from the Dean of Women. This is a list of houses where only women are taken as roomers and where a parlor is available for callers. As renting a room by mail is not satisfactory, the University would advise either a preliminary visit to the City for that purpose or arrival a day or two before registration. There should always be a definite understanding with the householder as to rates, times of payment, vacation charges, the period for which the room is engaged, and the privileges and rules of the house.

Whenever a room not on the approved list is desired or whenever removal is contemplated, the Dean of Women should be communicated with and her approval obtained before engaging rooms.

Prospective women students should address Miss Elisabeth Conrad, Dean of Women, The Ohio State University, Columbus, Ohio.

DORMITORIES FOR WOMEN

Oxley Hall, the hall of residence for women, accommodates seventy-two students. The hall contains suites, single and double rooms, with a students' sitting-room, dining-room, parlor,

sun parlor, and laundry, this latter for the use of the students two days each week. The Hall is governed by Student Government with the advice and supervision of the House Superintendent. For particulars, including rates, address House Superintendent, Oxley Hall, Columbus, Ohio.

St. Hilda's Hall has been provided for the women students of the Episcopal Church under the government of the Bishops of Ohio, with a local house committee, consisting of church women identified with the University. For information, address Superintendent of St. Hilda's Hall, 169 W. 11th Avenue, Columbus, Ohio.

South Hall, a residence for women, accommodates sixty-six students. For information, address Superintendent of South Hall, 196 W. 10th Avenue, Columbus, Ohio.

GRADUATE ASSISTANTSHIPS

To encourage graduates of this University, and of other similar and approved institutions, especially those in Ohio, to continue their studies and to undertake advanced work leading to the higher degrees, the University has established assistantships in several departments. These demand from one-quarter to one-half of the time of the student for laboratory and other similar assistance—as far as possible along the line of his major subject. The remainder of his time is given to graduate work. The assistantships pay from \$250 to \$500 for the academic year and in addition all fees are remitted, except the matriculation fee and a diploma fee for those students who receive degrees. Appointments to all assistantships are made annually in April or May for the following year. Students desiring such appointments can obtain application blanks by addressing the Dean of the Graduate School. Applications must be filed not later than March 1st.

SCHOLARSHIPS AND FELLOWSHIPS

In addition to the graduate assistantships, a limited number of scholarships and fellowships have also been established. The scholarships are open to students having a baccalaureate degree from an approved institution, and have a value of \$250 with

exemption from all fixed fees except the matriculation fee. The fellowships on the other hand are open only to students who have at least the Master's degree or its equivalent, and have a value of \$500 with like exemption from all fixed fees except the matriculation fee. Scholars and fellows are selected on a basis of merit and must devote all their time to graduate work. Candidates for these positions should file their applications not later than March 1st. Application blanks may be obtained by addressing the Dean of the Graduate School.

THE RHODES SCHOLARSHIPS

Men who have completed their Sophomore year at the Ohio State University are eligible to compete for the Cecil Rhodes Scholarships, tenable for three years at Oxford University, England, with a stipend of three hundred pounds each year. These scholarships are awarded on the combined basis of character, scholarship, athletics, and leadership in extra-curriculum activities. Further information may be obtained from any member of the Rhodes Scholarship Committee of Selection for Ohio: Chairman, President W. O. Thompson, The Ohio State University, Columbus, Ohio; Professor B. E. Schmitt, Western Reserve University, Cleveland, Ohio; Cary R. Alburn, Esq., Attorney, Garfield Bank Building, Cleveland, Ohio; Secretary, Professor Leigh Alexander, Oberlin College, Oberlin, Ohio.

ADMISSION

THE ENTRANCE BOARD

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, The Ohio State University, Columbus, Ohio.

ADMISSION TO COURSES LEADING TO A DEGREE

For complete entrance credit, an applicant for admission must be a graduate of a high school of the first grade or obtain credit by examination for fifteen entrance units.

For admission by examination or by certificate see the Bulletin of General Information.

DISTRIBUTION OF UNITS

As a basis for the most advantageous arrangement of a college course, applicants are advised to present the following units for admission: three in English; one in history; two in mathematics; one in physics or chemistry; four in foreign language; and four as choice may direct. If this work is not presented for entrance, the student's progress may be retarded, as he will be required to carry courses in the University to make up the deficiency and he may not be able to obtain a degree in the usual four years.

SPECIAL STUDENTS OF MATURE YEARS

A person of mature years who is unable to meet the entrance requirements in all respects, under certain circumstances may be permitted to matriculate for specified courses for which he can demonstrate adequate qualifications. An applicant under twenty-one years of age will not be considered. Inquiry concerning such admission should be addressed to the Entrance Board, and, to receive consideration must reach the Board not less than ten days in advance of the opening of the semester.

REQUIREMENTS FOR GRADUATION

Two general classes of curricula have been provided, both of which lead to the degree of Bachelor of Science in Education.

The first of these provides a wide range of electives and seeks to train superintendents and high school teachers. While the requirements are definite and fixed, the student may choose from a number of subjects the major branch in which he expects to qualify for teaching. Correlated with this, will be other branches which he may teach.

The second class provides fixed courses, permitting very little election, for the definite purpose of preparing teachers and supervisors in art, home economics, and manual training.

Upon entering the University, all students preparing to teach should consult the Dean of the College of Education regarding the arrangement of their work.

GENERAL COURSE

The work of the first two years must include:

(a) English

(a) English 101 and 104 (2-2) 4 hours

English 133 and either English 141, 142,
145 or 146

(3-3) 6 hours

English composition, four hours, and English literature, six hours, must be taken by all students. Students who enter with less than three units in English will be assigned additional work in English to make up their deficiency.

(b) Languages

(b) One of the following languages, which must be pursued through both the first and second years: (4-4-4-4) 16 hours
Greek, Latin, French, German, Spanish.

The second year will not be required of students who offer six entrance units in foreign language.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the

work in foreign language outlined for a degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for a degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for a degree.

(c) Mathematics

- (c) Mathematics 121-122: (3-3) 6 hours; or if mathematics is elected as the major subject, 131-132: (5-5) 10 hours. This requirement will be waived for students not electing mathematics as a major study.

Every student must secure credit either in high school, or in college for algebra through quadratics and for plane geometry.

(d) Science

- (d) One of the following Sciences: (4-4) 8 hours
or (3-3) 6 hours

Non-biological:

Physics 105-106 or 103-104
Chemistry 105-106 or 109-110
Geology (Geography) 121-122
Astronomy 101-102

Biological:

Anatomy 101-102
Physiology 101-102
Zoology 101-102
Botany 101-102

Every student is required to take one of the above sciences in college, and every student is also required to have either entrance or college credit for both a biological and a non-biological science. Students who enter without one unit in physics or in chemistry must take one of these subjects in college. Students who enter without one unit in zoology or in botany must take a biological science in college. Students who have entrance credit for one unit in physics or in chemis-

try and one unit in zoology or in botany must take a science in college.

(e) History

(e) One of the following: (3-3) 6 hours

American History 101-102

European History 101-102

Every student is required to secure credit for at least six semester hours in history; but for students who do not offer one unit of history for entrance the requirement is twelve semester hours.

(f) Psychology

(3-3) 6 hours

The work of the third and fourth years must include:

(1) Fundamental and Professional Courses

History of Education, not less than 6 hours

Elements of Sociology, not less than 6 hours

Educational Psychology, not less than 4 hours

The Principles and Practice of Teaching, 6 or 9 hours

School Administration, 3 or 6 hours

A course in the teaching of the major subject, not less than 2 hours

(2) Major and Minor Courses

The work which the student is preparing to teach (selected in the first or second year)—hours enough, usually thirty semester hours in the major field and eighteen to twenty in the minor field, to satisfy the professor in charge that the scholarship warrants a recommendation for teaching in a secondary school.

RESERVE OFFICERS' TRAINING CORPS

For students who complete the curriculum of the Reserve Officers' Training Corps (as defined in General Orders No. 49 as may be amended in the future by the War Department), the total number of hours required in the General Course for the degree of Bachelor of Science in Education is 112 (instead of 120) semester hours, in addition to the work in military science and physical education. For the other curricula in the College of Education a like reduction of eight hours in the requirements for the degree is authorized. The requirements in the professional subjects of the curricula must be fully met.

CURRICULA

GENERAL COURSE

First Semester	FIRST YEAR	Second Semester	
English	(101) 2	English	(104) 2
Group (b)	4	Group (b)	4
Group (c) or elective	3	Group (c) or elective	3
Group (d)	3 or 4	Group (d)	3 or 4
Group (e)	3	Group (e)	3
*Survey of Education	1	Military Science	1
Introductory		Physical Education	1
Military Science	1		
Physical Education	1		
Physical Education	(100) 1		
Hygiene			
	SECOND YEAR		
English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Group (b)	4	Group (b)	4
Major Work	5	Major Work	5
Military Science	1	Military Science	1
Physical Education (women)	1	Physical Education (women)	1
	THIRD YEAR		
Sociology	(101) 3	Sociology	(102) 3
History of Education	(101) 3	History of Education	(102) 3
Educational Psychology	(107) 2	Educational Psychology	(108) 2
Major Work	5	†Major Work	5
Correlated Work	2	Correlated Work	2
	FOURTH YEAR		
Principles and Practice		Principles and Practice	
of Education	(103) 3	of Education	(104) 3
or		School Administration (112 or 114)	3
Principles and Practice		or	
of Education	(104) 3	Principles of Education	(109) 3
School Administration	(101) 3	Major Work	5
Major Work	5	Elective	4
Elective	4		

The major work is pursued in the branch of study which the student is preparing to teach. A correlated work will be found in some branch closely allied to the major work and which the student may also elect to teach.

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

†NOTE: Principles of Education (103) 3 hours or School Administration (101) 3 hours, may be taken in the second semester and 3 hours of major work postponed until the fourth year.

Requirements for a Degree

Upon the satisfactory completion of one hundred and twenty semester hours, in addition to the requirements in military science and physical education, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ART

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units or less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the biological science required in the curriculum.

Students who enter without one unit in history must take at least six semester hours of either American or European history in addition to the requirement of the course.

ART

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Modern Language	4	Modern Language	4
Art	(131) 2	Art	(132) 2
Art	(119) 1	Art	(141) 2
Zoology	(101) 3	Zoology	(102) 3
or		or	
Botany	(101) 3	Botany	(102) 3
European History	(101) 3	European History	(102) 3
*Survey of Education	1	Military Science	1
Introductory		Physical Education	1
Military Science	1		
Physical Education	1		
Physical Education	(100) 1		
Hygiene			

SECOND YEAR

English	(141 or 145) 3	English	(133) 3
or		or	
English	(133) 3	English	(142 or 146) 3
Psychology	(101) 3	Psychology	(102) 3
Modern Language	4	Modern Language	4
Philosophy	(115) 2	Philosophy	(116) 2
Art	(133) 2	Art	(152) 3
Art	(151) 3	Art	(136) 2
Military Science	1	Military Science	1

For Students Majoring in Drawing

THIRD YEAR

Sociology	(101) 3	Sociology	(102) 3
Psychology	(107) 2	Psychology	(108) 2
Art	(153) 3	Art	(148) 2
Art	(134) 3	Art	(142) 3
Engineering Drawing	(131) 3	Engineering Drawing	(132) 3
Art	(147) 2	Elective	4
Elective	1		

FOURTH YEAR

History of Education	(101) 3	History of Education	(102) 3
Principles and Practice		Principles and Practice	
of Education	(103) 3	of Education	(104) 3
Art	(117) 3	Art	(139) 3
Art	(138) 3	Art	(137) 3
School Administration	(101) 3	Elective	3

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

For Students Majoring in Design**THIRD YEAR****First Semester**

Sociology	(101)	3
Psychology	(107)	2
Art	(153)	3
Art	(142)	3
Engineering Drawing	(131)	3
Elective		2

Second Semester

Sociology	(102)	3
Psychology	(108)	2
Art	(134)	2
Art	(143)	3
Engineering Drawing	(132)	3
Elective		3

FOURTH YEAR

History of Education	(103)	3	History of Education	(102)	3
Principles and Practice of Education	(101)	3	Principles and Practice of Education	(104)	3
Art	(147)	2	Art	(144)	3
Art	(117)	3	Art	(145)	3
School Administration	(101)	3	Elective		3
Elective		2			

For Students Majoring in History and Appreciation of Art**THIRD YEAR**

Sociology	(101)	3	Sociology	(102)	3
Psychology	(107)	2	Psychology	(108)	2
Art	(153)	3	Art	(155)	2
Art	(154)	2	Art	(156)	2
Engineering Drawing	(131)	3	Engineering Drawing	(132)	3
Elective		2	Elective		4

FOURTH YEAR

History of Education	(101)	3	History of Education	(102)	3
Principles and Practice of Education	(103)	3	Principles and Practice of Education	(104)	3
Art	(157)	3	Art	(158)	5
Art	(117)	3	Elective		4
School Administration	(101)	3			

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

HOME ECONOMICS**Regulations**

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry.

Students who enter with less than two units of foreign language will be required to take sixteen semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with two units and less than three of a foreign language, will be required to take eight semester hours of foreign language in addition to the work in foreign language outlined for the degree. Students who enter with three units and less than four of a foreign language, will be required to take four semester hours of foreign language in addition to the work outlined for the degree.

Students who enter without one unit in physics must take this subject in addition to the science requirements of the course.

Students who enter without one unit in history must take at least six semester hours of either American or European history.

HOME ECONOMICS

FIRST YEAR

First Semester			Second Semester		
Chemistry	(105 or 109)	4	Chemistry	(106 or 110)	4
English	(101)	2	English	(104)	2
Zoology	(101)	3	Zoology	(102)	3
French or German		4	French or German		4
Home Economics	(111)	2	Home Economics	(112)	2
*Survey of Education		1	Art	(119)	1
Introductory			Physical Education	(132)	1
Physical Education	(131)	1			
Physical Education	(100)	1			
Hygiene					

SECOND YEAR

Chemistry	(127)	2	Chemistry	(128)	1
Agricultural Chemistry	(123)	3	Home Economics	(102)	5
Home Economics	(101)	5	Physiology	(102)	3
Physiology	(101)	3	French or German		4
French or German		4	Physical Education	(134)	1
Physical Education	(133)	1	Elective		3

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

First Semester	THIRD YEAR	Second Semester	
Psychology	(101) 3	Psychology	(102) 3
Economics	(101) 3	Economics	(102) 3
Bacteriology	(107) 4	Home Economics	(104) 3
Art	(131) 2	Art	(141) 2
History of Education	(101) 3	History of Education	(102) 3
		Elective	3

FOURTH YEAR

Sociology	(101) 3	Sociology	(102) 3
Principles and Practice of Education	(103) 3	Principles and Practice of Education	(104) 3
Home Economics	(118) 3	School Administration (112 or 114)	3
School Administration	(101) 3	or	
Home Economics	(127) 3	Principles of Education	(109) 3
		Home Economics	(119) 4
		Elective	3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Regulations

Students who enter with less than three units in English will be assigned additional work in English to make up this deficiency.

Every student must secure credit either in high school or in college for algebra through quadratics and for plane geometry, in addition to the requirement of the course.

A student is required to have either entrance or college credit for both a biological and a non-biological science.

Students who enter without one unit in physics or in chemistry must take one of these subjects in addition to the requirement of the course. Students who enter without one unit in zoology or in botany must take a biological science. Students who enter without one unit in history must take at least six semester hours of either American or European history.

Students entering with four units in one language may be excused from further language work but must take an equiva-

lent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

Students entering with two or three units in one language may be excused from further language work provided they have taken in the University one additional year of that language, but must take an equivalent number of hours in some academic course, subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

All electives are subject to the approval of the Head of the Department of Industrial Education and the Dean of the College of Education.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Art	(131) 2	Art	(141) 2
American History	(101) 3	American History	(102) 3
or		or	
Foreign Language	4	Foreign Language	4
Engineering Drawing	(139) 4	Engineering Drawing	(140) 3
*Survey of Education	1	Industrial Education	(125) 2
Introductory		Military Science	1
Military Science	1	Physical Education	1
Physical Education	1		
Physical Education	(100) 1		
Hygiene			

SECOND YEAR

English	(133, 141, or 145) 3	English	(142, 146, or 133) 3
Chemistry	(105 or 109) 4	Chemistry	(106 or 110) 4
Psychology	(101) 3	Psychology	(102) 3
Industrial Education	(127) 3	Industrial Education	(123) 3
Shopwork	(105) 2	Shopwork	(115) 2
Military Science	1	Military Science	1
Elective	2	Elective	2

*This course may, with the permission of the Dean or Secretary, be postponed until the first semester of the second year.

First Semester		THIRD YEAR		Second Semester	
Physics	(103 or 105)	4	Physics	(104 or 106)	4
Sociology	(101)	3	Sociology	(102)	3
Psychology	(107)	2	Psychology	(108)	2
Industrial Education	(117)	2	Industrial Education	(118)	2
Industrial Education	(133)	2	Industrial Education	(134)	2
Industrial Education	(129)	3	Elective		3

FOURTH YEAR

History of Education	(101)	3	History of Education	(102)	3
Principles and Practice of Education	(103)	3	Principles and Practice of Education	(104)	3
School Administration	(101)	3	Industrial Education	(112)	3
Industrial Education	(111)	3	Industrial Education	(132)	3
Shopwork	(119)	3	Elective		3

Requirements for a Degree

Upon the satisfactory completion of the course as outlined, under the restrictions and requirements prescribed above, the student will be recommended for the degree of Bachelor of Science in Education.

ARTS-EDUCATION CURRICULUM

TWO DEGREES

Students who have received credit for one hundred and forty hours, in addition to the requirement in military science and physical education, and who have met all the requirements of the College of Arts, Philosophy and Science for the degree of Bachelor of Arts and who have met all the requirements of the General Curriculum in the College of Education for the degree of Bachelor of Science in Education, will be granted both degrees.

Applicants for both degrees must register in both colleges and have their electives approved by the Dean or Secretary of each college.*

Students registered for this combined Arts-Education curriculum must ordinarily expect to use at least one summer session in addition to the four years to complete the work.

*This registration in both colleges should be made at the beginning of the third year.

TWO-YEAR TECHNICAL COURSE

GENERAL INFORMATION

The Two-Year Technical Course is designed for the training of Related Subjects Teachers, and Coordinators of Trades and Industry, for the Smith-Hughes Classes.

The Related Subjects Teachers will be trained to give instruction in the subjects related to the trade or trades in which the pupils enrolled are working. The subjects are mathematics, drawing, science, and shop theory and practice.

The Coordinators will be trained to more closely coordinate the related technical instruction given in school, with the trade operations and processes with which the pupil comes in contact in the shop. His time will be divided between instruction in the school and the visitation of pupils while they are at work in the local shops.

The shortage of teachers for industrial and related subjects has created a demand by the State Board of Education for persons specially trained for this work. Salaries range from \$1500 as a minimum to \$3500 a year.

This special training will also fit men for teaching in the field of Manual Arts.

ADMISSION

The admission of students to the University is in charge of the Entrance Board, which determines the credits that shall be issued on all entrance examinations and certificates, and furnishes all desired information to applicants. Correspondence relating to admission should be addressed to the Entrance Board, The Ohio State University, Columbus, Ohio.

REQUIREMENTS FOR ADMISSION

Graduation from a first grade high school, or equivalent.

In the case of mature applicants, a good general education and an adequate trade experience.

TWO-YEAR TECHNICAL COURSE

CURRICULUM

FIRST YEAR

First Semester		Second Semester	
English	(101) 2	English	(104) 2
Mathematics	(121) 3	Mathematics	(122) 3
Engineering Drawing	(139) 4	Engineering Drawing	(140) 3
Psychology	(101) 3	Psychology	(102) 3
Shopwork	(115) 2	Shopwork	(105) 2
Industrial Education	(127) 3	Industrial Education	(128) 3

SECOND YEAR

Engineering Drawing	(104) 3	Shopwork	(107) 2
Shopwork	(119) 3	Shopwork	(121) 3
Industrial Education	(111) 3	Industrial Education	(112) 3
Economics	(101) 3	Economics	(102) 3
Industrial Education	(134) 2	Industrial Education	(132) 3
Elective	2 or 3	Elective	2 or 3

(NOTE: Numerals after topics above indicate catalog number of course in The Ohio State University Bulletin.)

Electives to be chosen with the consent of instructors, based on pupils' experience.

The above curriculum covers two academic school years of thirty-six weeks each. This allows the student an opportunity to work in some shop or industry during the summer months, thus gaining some first-hand knowledge of industry.

All of the courses listed in this curriculum are regular University courses and will receive full University credit. Students completing this curriculum will be able to continue, without loss of time, work for a degree in Education if they should so desire.

SCIENCE NURSING FOR TEACHERS

This is the fifth year of the Science Nursing Course planned for those intending to teach nursing in the Schools of Nursing.

(See the Bulletin of the College of Medicine for preceding courses.)

REQUIRED COURSES:

History of Education.....	(101-102)	3—3 hours
Psychology	(101-102)	3—3 hours
Elementary Psychology		
English	(101-104)	2—2 hours
Science Nursing	(159)	1 hour
History and Ethics of Nursing		
Survey of Education.....		1 hour
Introductory		

Principles of Education.....	(103)	3 hours
Principles and Methods of High School Teaching		
Public Speaking	(101)	2 hours
Science Nursing	(151)	2 hours
Observation and Criticism of the Teaching in Schools of Nursing		
Science Nursing	(153)	2 hours
Teaching of Nursing Principles and Methods		
Psychology	(107-108)	2—2 hours
Educational Psychology		
Science Nursing	(156)	2 hours
Teaching Practice in Schools of Nursing		
Science Nursing	(158)	2 hours
Observation of Supervision in Hospitals and Training Schools		
School Administration	(101)	3 hours
Public Education in the United States		
Public Health	(101)	2 hours
Public Health Administration		
Science Nursing	(162)	2 hours
History of Nursing and Contemporary Problems		
Public Health	(113)	2 hours
Personal Hygiene		

Students who present evidence of training in advance of these requirements may be granted advanced standing and are advised to elect an equal amount of other work subject to the approval of the Dean of the College of Education.

Suggested electives: Principles of Education (109); Principles of Sociology (101); Survey of Home Economics (125-126); Industrial Hygiene (122); Chemistry (105); Anatomy; Physiology; Materia Medica; Engineering Drawing.

DEPARTMENTS OF INSTRUCTION

AGRICULTURAL CHEMISTRY AND SOILS

Office, 203 Townshend Hall

PROFESSORS VIVIAN AND LYMAN, AND DEPARTMENT ASSISTANTS

AGRICULTURAL CHEMISTRY

123. Household Chemistry. Three credit hours. First semester. One lecture and two laboratory periods each week. Home Economics, second year. Prerequisite or concurrent, Chemistry 127-128. Mr. Lyman, Miss Edgar.

Lectures on the applications of chemistry to household affairs, particularly to human nutrition. Laboratory work consists of a brief introduction to quantitative analysis, followed by the analysis of foods, a study of the foodstuffs and their digestive changes.

AMERICAN HISTORY

Office, 207 University Hall

PROFESSORS G. W. KNIGHT, HOCKETT, AND A. C. COLE, ASSISTANT PROFESSOR WOOD, MR. WITKE, MR. ROSEBOOM, MR. RUSSELL

Students who desire to be recommended for teaching positions in American history must take a fundamental course in European history (medieval and modern or English), Courses 101-102 or 105-106 and 121 in American history, and at least two other semesters in American history. The following plan is recommended for the prospective teacher: 101-102, 103-104, 119, 121, and at least one other advanced course running through a year. As a preparation for a graduate major in this field, the student will find Political Science 101-102 and Economics 101-102 essential, in addition to the above work in European and American history. (See announcement of the department in the Bulletin of the Graduate School.)

101-102. History of the United States (1763-1920). Three credit hours. The year. Mr. Knight, Mr. Hockett, Mr. Wood, Mr. Witke, Mr. Roseboom, Mr. Russell.

American History 101 is given also during the second semester, and American History 102 in the first semester.

This course comprises a study of the history of the United States, in which political, constitutional, and economic phases

receive chief attention. The first semester covers the period 1763-1837. The second semester covers the period 1837-1920. Textbook, discussion, and collateral readings. This course, or Course 105-106, must precede all other courses in American history except 125-126. Open only to Freshmen and Sophomores, except by special permission of the department.

American History 101 is given also during the second semester.

American History 102 is given also during the first semester.

105-106. General Survey of United States History. Three credit hours. The year. Mr. Cole.

This is a course of the same general scope and character as American History 101-102, but is designed for upper classmen whose primary interest is in other fields. Lectures, quizzes, and assigned readings.

Not open to first or second year students, nor to anyone who has taken American History 101-102. European History 101-102 or 103-104 may with advantage precede.

107. Constitutional History of the United States to 1837. Two credit hours. First semester. Prerequisite, American History 101-102 or 105-106. Political Science 101 will be found a valuable adjunct to this course. Mr. Hockett.

Constitutional ideas of Americans in the Revolutionary period, the formation of the federal constitution; constitutional questions involved in the organization of the government, party controversies, and foreign relations; the great decisions of the supreme court under John Marshall; the Missouri Compromise; the nullification episode. Lectures, discussion, and reports.

108. Constitutional History of the United States since 1837. Two credit hours. Second semester. Prerequisite, American History 101-102 or 105-106. American History 107 affords a good foundation, and Political Science 101 a valuable adjunct. Mr. Hockett.

Constitutional aspects of the slavery struggle, the Civil War, and Reconstruction; questions relating to the power of Congress to regulate interstate commerce, levy an income tax, control trusts, etc.; constitutional problems resulting from the acquisi-

tion of territory in the War with Spain; recent amendments to the constitution. Lectures, discussion, and reports.

109. Early Political Parties in the United States. Two credit hours. First semester. Prerequisite, American History 101-102 or 105-106. Mr. Cole.

The radical party of the Revolution; the evolution and growth of national parties in the period thereafter until 1852; the relation of social and economic forces to parties; the influence of newspapers on public opinion; the rise of great party leaders. Lectures, discussion, and research in contemporary newspapers and other material.

110. Political Parties in the United States (1852-1920). Two credit hours. Second semester. Prerequisite, American History 101-102 or 105-106. American History 109 affords a good foundation. Mr. Cole.

The development of national parties from 1852 to the present time, special attention being devoted to the effect of the Civil War on parties, and to the influence of the new economic and social conditions in creating new parties and policies. Lectures, discussion, and reports.

***103-104. The Colonization of North America.** Three credit hours. The year. Prerequisite, American History 101-102 or 105-106. Mr. Wood.

The history of the North American continent treated as a unit from 1492 to 1783. English, Spanish, French, Dutch, Swedish, and Russian colonization all receive due treatment. The chief movements treated are the transfer of European culture and institutions to America, the expansion of the colonies and the struggle between the nations for the mastery of the continent, and the winning of the independence of the English colonies from Great Britain. Textbook, discussion, and collateral readings.

***115-116. The Pioneer in American History.** Three credit hours. The year. Prerequisite, American History 101-102 or 105-106. Mr. Hockett.

*Not given in 1921-1922.

The share of the explorer, the fur trader, the Indian fighter, the pioneer farmers, the miner, the rancher, in the making of America. Lectures, discussions, and assigned readings.

117-118. History of Canada. Two credit hours. The year. Given biennially, alternating with American History 133-134. Prerequisite, American History 101-102 or 105-106. Mr. Wittke.

A general survey of Canadian history from the earliest times to the present. Special attention is given to the relations of Canada with the United States and with the Mother Country, and to a comparison of Canadian institutions and problems with our own. Lectures, readings, and discussions.

***133-134. The Influence of Racial Groups on the History of the United States.** Two credit hours. The year. Given biennially, alternating with American History 117-118. Prerequisite, American History 101-102 or 105-106. Mr. Wittke.

The share of different racial groups in the building of America, from the colonial to the modern period, with special emphasis upon the contribution of the immigrant to American social and economic history and his influence upon American politics.

NOTE: For course, War Issues, see European History 131-132—**The World War: its Causes, Issues, and Results.** Three credit hours. The year. Not open to first year students.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

For all courses in this group the prerequisite is four semesters in the Social Science group, of which at least two must be in American history.

119. Introduction to Historical Research. Two credit hours. First semester. Prerequisite, four semesters in American history. Mr. Hockett.

Drill in finding historical material by the use of standard guides, manuals, and catalogs, followed by practice in criticizing material, and exercises in historical composition. Attention is given throughout to approved forms for note-taking, citation of authorities, etc.

Required of students who plan to pursue graduate courses in American history, also of students in the College of Education who take history as a major if the greater part of their major is in the American field.

*Not given in 1921-1922.

*111. **The Slavery Struggle in the United States.** Three credit hours. First semester. Given biennially, alternating with American History 113. Prerequisites, American History 101-102 or 105-106 and at least two other semesters in the Social Science group. Mr. Cole.

The development of slavery in its connection with the constitutional and political history of the country, territorial expansion, the rise and fall of parties, the divergence of the sections, and the eventual abolition of the institution.

*112. **Reconstruction and its Results, 1863-1920.** Three credit hours. Second semester. Given biennially, alternating with American History 114. Prerequisites, American History 101-102 or 105-106 and at least two other semesters in the Social Science group. American History 111 affords a good foundation. Mr. Cole.

The aftermath of the slavery struggle as traced in the reconstruction of the southern states and in the readjustment of society and of the states to the new status of the negro.

113. **American Diplomacy to the Close of the Civil War.** Three credit hours. First semester. Given biennially, alternating with American History 111. Prerequisites, American History 101-102 or 105-106 and at least two other semesters in the Social Science group. Mr. Cole.

The foreign relations of the United States, beginning with the diplomacy which resulted in the establishment of independence and including such subjects as the struggle for neutral rights and commercial recognition, the extension of territory on the continent, the origin of the Monroe Doctrine, and the international controversies of the Civil War. Lectures, discussion, and reports.

114. **American Diplomacy since the Civil War.** Three credit hours. Second semester. Given biennially, alternating with American History 112. Prerequisites, American History 101-102 or 105-106 and at least two other semesters in the Social Science group. Mr. Knight.

Problems in the diplomacy of the United States, resulting from the Civil War, the development of the Monroe Doctrine,

*Not given in 1921-1922.

the acquisition of dependencies, relations with Latin America and the Orient, arbitration, the Isthmian Canal, and neutral rights during the Great War in Europe. Lectures, discussion, and reports.

121. The Teaching of American History. Two credit hours. First semester. Mr. Knight.

Lectures, readings, and quiz upon methods of teaching history in the secondary schools, schemes of courses, equipment, examination of textbooks; followed by practice work in the preparation of lessons for teaching, and the conduct of recitations in American history. This course must be taken by all who expect to be recommended for teaching positions in this subject.

Prerequisites: This course must be preceded by at least four semester courses in history, and either preceded or accompanied by a fifth course. Of these, two should be in medieval and modern European history or in English history, and the others in American history.

123-124. Recent History of the United States, 1870-1920. Three credit hours. The year. **Prerequisites,** American History 101-102 or 105-106 and at least two other semesters in the Social Science group. Economics 101-102 will be found a valuable adjunct to this course. Mr. Knight.

An intensive study of the political, constitutional, industrial, and social life of the nation and the state during the past generation; it includes a consideration of new applications of the constitution, industrial development, territorial expansion, the entry of the United States into the world politics, third party movements, and the rise of the new democracy. Lectures and individual investigations.

***211-212. Spanish Problems in American Diplomacy.**

213-214. Special Problems in Recent American History.

215-216. Special Problems in the History of the Westward Advance.

***217-218. Special Problems in the Constitutional History of the United States.**

*Not given in 1921-1922.

219-220. Special Problems in the Recent History of the South.

222. Great American Historians.

ANATOMY

Office, 105 Biological Building

PROFESSOR LANDACRE, ASSISTANT PROFESSOR BUCK, MR. KNOUFF,
MR. BAKER, AND DEPARTMENT ASSISTANTS

Courses in Anatomy are designed for the following classes of students:

(a) Students desiring a general training in the anatomy of the vertebrates should take Comparative Anatomy 101-102 as a preliminary course. This may be followed by General Vertebrate Embryology 103-104, or Anatomy and Embryology of the Frog 105-106 or any of the courses listed for advanced undergraduates. Students interested in the nervous system should take 107 or 108 as a preliminary course which may be followed by 109-110 for more extended study from a comparative standpoint.

(b) Students desiring to major in Anatomy or to take a minor in Anatomy should begin work with 101-102 or 103-104 and follow these with 105-106, or 107-108, or 109-110, and 119. The strictly graduate courses are listed in the Graduate School Bulletin.

101. Comparative Anatomy of the Vertebrates. Three to five credit hours. First semester. One recitation and five to eight laboratory hours each week. Not open to Freshmen. Mr. Baker.

Fishes, amphibians, and reptiles.

102. Comparative Anatomy of the Vertebrates. Three to five credit hours. Second semester. One recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101 or an equivalent. Mr. Baker.

Birds and mammals.

105. Anatomy of the Frog. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Not open to Freshmen. Mr. Landacre.

The gross anatomy of the frog in addition to the preparation of tissues and organs for study.

106. Anatomy of the Frog. Three to five credit hours. Second semester. One lecture or recitation and five to eight laboratory hours each week. Not open to Freshmen. Mr. Landacre.

The histology and early development of the frog.

107. Introductory Neurology. Three to five credit hours. First semester. One recitation or lecture and four to eight laboratory hours each week. Not open to Freshmen. Mr. Landacre, Mr. Baker.

The gross structure and development of the vertebrate nervous system and sense organs.

108. Introductory Neurology. Three to five credit hours. Second semester. One recitation or lecture and four to eight laboratory hours each week. Not open to Freshmen. Mr. Landacre, Mr. Baker.

The minute structure of the brain, spinal cord, and sense organs of the vertebrates with special emphasis on the conduction paths of the brain and cord.

116. The Digestive System. Three credit hours. Second semester. One lecture and four laboratory hours each week. Elective for third or fourth year students. Prerequisite, one year's work in biological science. Mr. Landacre, Mr. Buck.

A study of the gross and microscopic structure of the digestive system and associated organs in one of the higher mammals and in man.

118. Elementary Comparative Anatomy of Vertebrates. Three to five credit hours. Second semester. One lecture and five to eight laboratory hours each week. Required of students in the Arts-Medicine and Science-Medicine courses. Prerequisites, Zoology 101, Physiology 101, or an equivalent. Mr. Landacre, Mr. Knouff, Mr. Baker.

A preliminary study of the comparative anatomy and embryology of the vertebrates accompanied by careful dissections of the shark, frog, and cat. This course meets the pre-medical requirements in Anatomy.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. Comparative Neurology. Three to five credit hours. First semester. One lecture or recitation and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The origin and structure of the nervous system and sense organs of the lower vertebrates.

110. Comparative Neurology. Three to five credit hours. Second semester. One lecture or conference and five to eight laboratory hours each week. Prerequisite, Anatomy 101-102 or an equivalent. Mr. Landacre.

The structure of the central nervous system and sense organs of the higher vertebrates, including man.

FOR GRADUATES

201-202. Vertebrate Embryology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ART

Office, 203 Hayes Hall

PROFESSOR KELLEY, ASSISTANT PROFESSOR ROBINSON, MR. NORRIS, MR. WEBBER, MISS KNAUBER, MISS WILSON

117. The Theory and Practice of Teaching Art. Three credit hours. First semester. Prerequisites, Art 136 and 142.

Lectures, experiments, and observations.

119. Appreciation of Art. One credit hour. Either semester. Mr. Kelley.

This course is designed to give a critical and appreciative attitude toward art to those who have no technical knowledge of the subject.

121. Costume Design. Two credit hours. Either semester. Prerequisites, Art 131 and 141. Miss Knauber.

Art in dress; the direct application of design principles and color harmony to dress.

131-132. Elementary Drawing. Two credit hours. The year. All instructors.

This course is designed to develop a thorough knowledge of form and values in black and white, also the use of free-hand perspectives.

Art 131 is given also during the second semester.

Art 132 is given also during the first semester.

133. Advanced Drawing. Two credit hours. Either semester. Prerequisite, Art 131-132.

This course is designed to give the student some freedom in the use of drawing as a medium of expression. Drawing from the antique and the costume model.

134. Drawing from Life. Three credit hours. Either semester. Prerequisite, Art 133 and permission of the instructor. Mr. Kelley.

It is suggested that Art 175 be taken concurrently.

136. Water Color Painting. Two credit hours. Either semester. Prerequisites, Art 133 and 141.

Painting from still life and costume models. The purpose of this course is to train the color perceptions of the student.

137. Advanced Water Color. Three credit hours. Second semester. Prerequisite, Art 136.

138. Oil Painting. Three credit hours. First semester. Prerequisite, Art 136.

Practice in the use of oil colors. Painting from still life.

139. Advanced Oil Painting. Three credit hours. Second semester. Prerequisite, Art 138.

Painting from the costume model.

141. Elementary Design. Two credit hours. Either semester. Prerequisites, Art 131 and 119. All instructors.

The principles of the theory and practice of design.

142. Advanced Design. Three credit hours. Either semester. Prerequisite, Art 141.

Advanced work in organic design, familiarizing the student with professional design requirements.

143. Specialized Design. Three credit hours. Second semester. Prerequisite, Art 142 or Art 121.

Field to be chosen by the student. Recommended for students desiring to study interior decoration.

144. Commercial Design. Three credit hours. Second semester. Prerequisite, Art 142. Mr. Norris.

This course is aimed to give a grasp of commercial design problems.

145. Thesis Work Design. Three credit hours. Second semester. Prerequisite, Art 143.

This course is required of students graduating in design.

147. Illustrative Drawing. Two credit hours. First semester. Two two-hour periods each week. Prerequisite, Art 132. Mr. Norris.

Drawing for reproduction in pen and ink with special reference to architectural and scientific drawing.

148. Illustrative Drawing. Two credit hours. Second semester. Two two-hour periods each week. Prerequisite, Art 132. Mr. Norris.

Various methods of drawing for reproduction in relation to transparent and opaque wash but not pen and ink. This course deals with the standard methods of technique for illustrations which are to be reproduced.

151. History of Classic Art. Three credit hours. Either semester. Not open to Freshmen. Mr. Kelley.

The study of the art of Greece and Rome, with some consideration of Egypt, Assyria, and Persia. Illustrated lectures, reading, and reports.

152. History of Medieval Art. Three credit hours. Second semester. Prerequisite, Art 151. Not open to Freshmen. Mr. Webber.

From the origins of Christian art in Rome to the end of the Gothic period. Illustrated lectures, reading, and reports.

153. History of Renaissance and Modern Art. Three credit hours. First semester. Prerequisite, Art 151. Not open to Freshmen. Mr. Webber.

From the beginning of the Renaissance in Italy to the beginnings of modern art in the eighteenth century. Illustrative lectures, reading, and reports.

160. Modern Painting and Sculpture. Three credit hours. First semester. Three lectures a week and occasional reports. Miss Robinson.

This course will deal with the art of the last two centuries, laying particular stress upon the development in France, England, and the United States.

170. Modelling. Two credit hours. First semester. Prerequisite, Art 131.

The study of form in three dimensions. Laboratory.

171. Advanced Modelling. Three credit hours. Second semester. Prerequisite, Art 170.

This course includes the principles of cast-making, with a certain amount of practice.

172. Design in the Minor Arts. Three credit hours. Second semester. Prerequisite, Art 142, or may be taken concurrently.

A study of the application of styles and motifs of various historic periods, with particular reference to the minor arts. Lectures and laboratory.

175. Composition. One credit hour. Either semester. Prerequisite, Art 133.

Weekly problems in illustrative and decorative composition, with criticism. This course should be taken at the same time as Art 134.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

157. Art of China and Japan. Three credit hours. Second semester. Prerequisites, Junior standing and at least two other courses in this department. Mr. Kelley.

Lectures, reading, and reports.

158. Thesis in Art History. Five credit hours. Second semester. Prerequisite, fifteen hours of art history. Mr. Kelley.

This course is required of students graduating in art history.

165-166. Proseminary: Specialized Study in Important European Art Periods. Two to four credit hours. First and second semesters. Prerequisite, Art 151.

Different periods will be elected in succeeding years, thereby going more deeply into narrower fields than in the more general courses, Art 151, 152, and 153.

ASTRONOMY

Office, Emerson McMillin Observatory

PROFESSOR LORD, ASSOCIATE PROFESSOR MANSON

101-102. General Astronomy. Three credit hours. The year. Mr. Lord, Mr. Manson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

104-105. Astronomy, Geodesy, and Least Squares. Three credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

107-108. Advanced Astronomy. Three to five credit hours. The year. Prerequisite, the calculus. Mr. Lord, Mr. Manson.

BACTERIOLOGY

Office, 202 Veterinary Laboratory Building

PROFESSORS MORREY AND STARIN, ASSISTANT PROFESSOR
MASTERS, MR. OCKERBLAD, AND DEPARTMENT
ASSISTANTS

FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses in Bacteriology are open to advanced undergraduates and graduate students only, not to Freshmen or Sophomores. The instructor in charge must be consulted before electing.

107. General Bacteriology. Four or five credit hours. First semester. Mr. Morrey, Mrs. Masters, and department assistants.

This course is a prerequisite to all the elective courses in the department and is designed to prepare for special work. The lectures consider the botanical relationship of bacteria, their morphology, classification, effect of physical and chemical environment, action on food material, etc. The laboratory work includes preparation of the ordinary culture media and making of cultures on these media, staining methods, and some typical bio-chemical actions.

108. Pathogenic Bacteria. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the more important bacteria producing disease in man, including cultural and staining properties, methods of diagnosis, animal inoculation; also, in the lectures, ways of transmission and methods of protection against infectious disease; sanitation and the theories of immunity.

114. Water Examination, Sewage Disposal, Water Filtration. Two to five credit hours. Second semester. Prerequisite, Bacteriology 107. Mr. Morrey, Mrs. Masters.

A study of the methods and devices used in these processes and of the organisms concerned. The modern water filtration and sewage disposal plants of the City of Columbus afford most excellent opportunities for practical demonstration and also for study of special problems.

***116. Bacteriological Chemistry.** Two to five credit hours. Second semester. Prerequisite, Bacteriology 107.

This course is designed for the study of special problems in bacterial activities from the chemical standpoint. It is essentially an investigation course.

117-118. Immunity and Serum Therapy. Two credit hours, first semester; two to five credit hours, second semester. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

A discussion of the general principles of immunity, including toxins and anti-toxins, bactericidal substances, agglutinins, precipitins, opsonins, etc. Immunological relations of the various infectious diseases are considered. Laboratory work consists in the preparations of toxins, anti-toxins, anti-bacterial substances, bacterial vaccines, and in the serological methods of diagnosis.

119-120. Pathogenic Protozoa. Two credit hours. The year. Prerequisites, Bacteriology 107 and 108 or equivalents. Mr. Starin.

The various protozoal diseases are considered, with especial attention to trypanosomiasis, piroplasmoses, and spirochaetoses.

125-126. Special Problems in Bacteriology. Three to five credit hours. The year. Conferences, library, and laboratory work. Prerequisite, one year's work in bacteriology. Mr. Morrey, Mr. Starin.

FOR GRADUATES

201-202. Research in Pathogenic Bacteriology.

203-204. Research in Agricultural Bacteriology.

*Not given in 1921-1922.

BIBLIOGRAPHY

Office, The Library

MISS JONES

101-102. The Library and the School. One credit hour. The year. Miss Jones.

Lectures, readings, and problems on the use of books, with special reference to methods of teaching secondary school students how to make use of a library. Such practice work in technical library methods as will enable a teacher to take charge of a collection of books in a school building.

BOTANY

Office, 102 Botany and Zoology Building

PROFESSORS TRANSEAU AND SCHAFFNER, ASSISTANT PROFESSORS STOVER, SAMPSON, AND WALLER, MR. TIFFANY, MR. SAYRE, AND DEPARTMENT ASSISTANTS

101-102. General Botany. Three credit hours. The year. Two recitations and two laboratory hours each week. Mr. Sampson, Mr. Waller, Mr. Tiffany, Mr. Sayre, Mr. E. L. Stover.

A study of structure, growth, nutritive processes, and water relations of the vegetative body of plants, and the relation of plants to their environments, during the first semester. A study of the reproduction, heredity, and evolution of plants, the nutrition and reproduction of bacteria and fungi in relation to plant diseases and sanitation; a brief survey of the great plant groups and the classification of some of the common plants of Ohio, during the second semester.

107. Plant Micro-technique. Three credit hours. First semester. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102.

An introduction to the technique of microscopic preparations, fixing, section cutting, mounting and staining.

108. Plant Anatomy. Three credit hours. Second semester. One lecture and four laboratory hours each week. Prerequisite, Botany 101-102.

A study of the structure and development of tissue systems and their relation to environmental factors.

119-120. Local Flora. Three credit hours. The year. Six laboratory hours each week. Prerequisite, Botany 101-102. Mr. Tiffany.

Field and laboratory study of the local flora. Practice in the identification of plants belonging to all of the great groups. Either course may be elected separately.

123. Morphology of Lower Plants. Four credit hours. First semester. Two lectures and four laboratory hours each week. Prerequisite, Botany 101-102.

A study of the evolution and life histories of the more important groups of algae, fungi, and bryophytes.

124. Morphology of Vascular Plants. Four credit hours. Second semester. Two lectures and four laboratory hours each week. Prerequisite, Botany 101-102.

A study of the evolution and life histories of the more important groups of ferns and seed plants.

125-126. Plant Physiology. Four credit hours. The year. Lectures and laboratory. Prerequisite, Botany 101-102. Mr. Transeau.

An experimental study of plant processes and the relation of these processes to environmental factors. Desirable antecedent, elementary organic chemistry.

150. The Teaching of Botany. Three credit hours. Second semester. Prerequisites, Botany 101-102 and one additional year of botany or zoology. Mr. Transeau.

Lectures, laboratory, and field work, with practice teaching under supervision.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

117-118. Plant Ecology. Three credit hours. The year. One lecture and four laboratory hours each week. Prerequisites, Botany 101-102 and one additional year of some biological subject. Mr. Transeau.

The ecological relations of the forests, prairies, and deserts of North America. Field work on the local plant associations.

127-128. Plant Pathology. Four credit hours. The year. Two lectures and four laboratory hours each week. Prerequi-

sites, Botany 101-102 and one additional year of some biological subject. Mr. Stover.

The course includes a study of the nature, symptoms, classification, and course of plant diseases, their relations to environmental conditions; the diseases of particular crop plants and the methods of control; the classification and life histories of parasitic plants.

In the laboratory attention is given to the preparation of culture media, the isolation and culture of plant pathogens, the inoculation of plants followed by a study of the progress of the disease, and the preparation and use of preventive materials. A number of plant diseases are studied both in the laboratory and in the field.

129-130. Principles of Taxonomy. Three to five credit hours. The year. Prerequisites, Botany 101-102 or equivalent and one additional year of some biological subject. Mr. Schaffner.

The organography of the flowering plants from the standpoint of evolution, including a special consideration of phyletic series, probable relationships, the significance of vestiges, specializations and adaptations, and the development of a correct taxonomy.

133-134. Minor Investigations. Three to five credit hours. The year. Prerequisites, Botany 101-102 and one additional year of some biological subject. Mr. Transeau, Mr. Schaffner, Mr. Stover, Mr. Sampson, Mr. Waller, Mr. Sayre.

***135-136. Evolution of Plants.** One credit hour. The year. Prerequisites, Botany 101-102 and one additional year of some biological subject. Mr. Schaffner.

The evolution of plants with a general discussion of the problems and factors involved, including both the scientific and philosophical aspects of the subject.

155. Economic Botany. Three credit hours. First semester. Two lectures and two laboratory hours each week. Elective. Prerequisites, Botany 101-102 and one additional year of botanical work. Mr. Waller.

Important economic plants of the world studied with reference to their geographic distribution, commercial importance,

*Not given in 1921-1922.

and uses. A summary of the centers of crop production in relation to natural centers of vegetation, environmental, economic, and other conditions.

FOR GRADUATES

201-202. Research in Systematic Botany.

203-204. Research in Morphology and Cytology.

205-206. Research in Physiology, Ecology, and Economics.

207-208. Research in Mycology and Plant Pathology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

CHEMISTRY

Office, 100 Chemistry Building

PROFESSORS McPHERSON, FOULK, HENDERSON, EVANS, AND WITHROW, ASSISTANT PROFESSORS BOORD, HOLLINGSWORTH, MACK, AND FRANCE, MR. VILBRANDT, AND
DEPARTMENT ASSISTANTS

105. Elementary Chemistry. Four credit hours. First semester. One lecture, one quiz, and six laboratory hours each week. No prerequisite. Mr. Evans and department assistants.

An introductory course in the chemistry of the non-metals arranged for students who have not offered chemistry as a unit for admission to the University. This course is to be followed by Chemistry 106 in the second semester.

106. Elementary Chemistry and Qualitative Analysis. Four credit hours. Second semester. One lecture, one quiz, and six laboratory hours each week. Prerequisite, Chemistry 105. Mr. Evans and department assistants.

An introductory course in the chemistry of the metals, the laboratory work constituting an elementary course in qualitative analysis.

109. General Chemistry. Four credit hours. First semester. One lecture, one quiz, and six laboratory hours each week. Prerequisite, one unit of chemistry offered for admission to the University. Mr. Evans and department assistants.

A general course in the chemistry of the non-metals arranged for students who have had a satisfactory course in

chemistry in the secondary schools. This course is to be followed by Chemistry 110 in the second semester.

110. General Chemistry and Qualitative Analysis. Four credit hours. Second semester. One lecture, one quiz, and six laboratory hours each week. Prerequisite, Chemistry 109. Mr. Evans and department assistants.

A general course in the chemistry of the metals, the laboratory work constituting an introductory course in qualitative analysis.

113-114. Advanced General Chemistry. Two credit hours. The year. One lecture and one quiz each week. Prerequisite, Chemistry 106 or 110. Mr. Henderson.

This course is arranged for all students who decide to continue chemistry beyond the first year. It consists of a review of the more difficult topics of the first year courses, together with the development of other topics not taken up in those courses. It should be accompanied by quantitative analysis or some other laboratory course.

119-120. Quantitative Analysis. Four credit hours. The year. One quiz and nine laboratory hours each week. Prerequisite, Chemistry 106 or 110. Mr. Foulk, Mr. Hollingsworth, and department assistants.

The fundamental course in quantitative analysis comprising the elementary principles of gravimetric and volumetric analysis with typical analytical methods. The course must be accompanied by Chemistry 124 in the second semester, excepting by special permission of the instructor, and it is desirable that it be accompanied by Course 113-114. The laboratory is open every day, morning and afternoon.

127. Organic Chemistry (Home Economics). Two credit hours, first semester. One credit hour, second semester. Prerequisite, Chemistry 106 or 110. Mr. McPherson.

This is an elementary course in organic chemistry arranged with special reference to the needs of students in Home Economics and in related subjects.

151-152. Organic Chemistry. Two credit hours. The year. Two lectures each week. Prerequisites, Chemistry 114 and 120. Mr. McPherson.

This is the fundamental course in organic chemistry arranged for all students expecting to specialize in chemistry. The laboratory work is described under the following course numbers.

153-154. Organic Chemistry (Laboratory). Two or three credit hours. The year. Six or nine laboratory hours each week. Prerequisite or concurrent course, Chemistry 151-152. Mr. Boord and assistants.

This course comprises the laboratory work naturally belonging with Courses 151-152, and should in general accompany these courses. It consists of the preparation of a series of typical organic compounds, and a study of their properties.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

132. The Teaching of Chemistry. Two credit hours. Second semester. Two lecture-quizzes or conferences each week. Prerequisites, Chemistry 106 or 110, 119, 151-152. Mr. McPherson.

This course consists of reports upon assigned readings in educational journals and monographs, discussion of the proper place of chemistry in school curricula, the methods of conducting lecture and laboratory work with practice teaching, the proper planning of a laboratory, the purchase of materials, and similar problems confronting the teacher of chemistry.

157-158. Physical Chemistry. Three credit hours. The year. Three lectures each week. Prerequisites, Chemistry 114, 120, 152, and Physics 104, 106, or 112, except by special permission of the instructor. Mr. Mack.

The fundamental course in physical chemistry arranged for all students specializing in chemistry. It conforms to the usual course as offered in most universities.

161. Physical Chemistry (Laboratory). Two or three credit hours. Either semester. Six or nine laboratory hours each week. Prerequisite or concurrent, Chemistry 157-158. Mr. Mack.

An elementary course in physicochemical measurements, including such topics as molecular weights and conductivity, together with some practice in glass blowing.

171. Chemical Bibliography. One credit hour. First semester. Lecture, quiz, and library practice. Prerequisite, twenty-six credit hours of chemistry. Mr. Boord.

Designed to train the advanced student in the use of the chemical library and instruct him in the character of the various journals, dictionaries, handbooks, and tables there available. The use of the abstract journals is especially emphasized.

173. Chemical Biography. One credit hour. Second semester. One conference hour each week. Prerequisite, twenty-six credit hours of chemistry. Mr. Henderson.

Designed to familiarize the advanced undergraduate student with the leading personages in chemistry, particularly in recent and contemporary times, as well as with the available sources of information relating to such persons.

187. Inorganic Preparations. Three credit hours. Either semester. One conference and six laboratory hours each week. Prerequisites, Chemistry 114, 120. Mr. Henderson.

The methods employed in the preparation of pure inorganic compounds; the chief classes of such compounds; and the laboratory preparation of a number of examples sufficient to develop reasonable technique in applying the methods and to illustrate the classes.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ECONOMICS AND SOCIOLOGY

Office, 5 Page Hall

PROFESSORS HAGERTY, HAMMOND, HUNTINGTON, NORTH, AND HAYES, ASSISTANT PROFESSORS WALRADT, MARK, LUMLEY, AND HELD, MR. CLARKE, AND DEPARTMENT ASSISTANTS

ECONOMICS

The following courses are open only to advanced undergraduates and graduates: 119, 135, 136, 141, 144, 159, 160, 165, 166, 203, 204, 207-216.

101-102. Principles of Economics. Three credit hours. The year. Not open to Freshmen or Seniors. (See Course 135-136.) Should precede all courses in Economics except 132, 133; concurrent 139. Mr. Hayes, instructors and assistants.

A study of the laws of production, exchange, distribution, and consumption of wealth, combined with an analysis of the industrial actions of men as regards land, labor, capital, money, credit, rent, interest, wages, etc. Textbook, lectures, and individual investigation.

Economics 101 is given also during the second semester.

Economics 102 is given also during the first semester.

119. Women in Industry. Three credit hours. First semester. Prerequisite, Economics 101-102 or Sociology 101-102. Miss Mark.

A study of the economic position of women. Their relation to the household; their industrial and commercial opportunities; their preparation for various occupations. Legal, social, and industrial problems created by the entrance of women into the field of industry.

120. The Household. Three credit hours. Second semester. Prerequisite or concurrent, Sociology 101-102 or Economics 101-102. Miss Mark.

The family as an economic institution. The evolution of household industries and its effect upon the home. Organization of the household with reference to the functions of man and woman.

132. Principles of Social Geography. Three credit hours. Either semester. Not open to Juniors and Seniors. Prerequisite to all courses in economic geography. Mr. Huntington, Mr. Blanchard, and assistants.

The geographic factors in environment: land, water, climate, plants, and animals; their influence upon man, his distribution and his activities; and the uses which man makes of his geographic environment to gratify his manifold wants.

133. Economic Geography. Three credit hours. Second semester. Not open to Juniors and Seniors. Prerequisite to all advanced courses in economic geography. Mr. Huntington, Mr. Blanchard, and assistants.

The influences of geographic environment, with special reference to North America.

135-136. Principles and Problems. Three credit hours. The year. Open only to Seniors in the Colleges of Arts, Philosophy,

and Science and Education, and to graduate students who are not taking Economics as a major. Not open to students who have had Economics 101-102 or its equivalent. Mr. Hammond.

A general course covering the entire field of Economics, intended for those students who plan to do only one year's work in Economics or who have not had time or opportunity to do work in this field prior to their Senior year. The scope of the work is the same as in Courses 101-102 but the lectures, readings, and recitations will be suited to the needs of maturer students.

141. Public Finance. Two credit hours. First semester. Prerequisite, Economics 101-102. Mr. Walradt.

Public expenditures, their growth and control; the budget; financial administration; public debts; systems of public revenue and taxation.

144. Problems of Taxation. Two credit hours. Second semester. Prerequisite, Economics 141. Mr. Walradt.

A critical examination of tax systems with particular reference to questions of incidence and of proposed reforms. The Ohio system of taxation will be given special consideration.

147-148. Financial History of the United States. Two credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

A study of the fiscal and monetary history of the country from colonial times to the present, with special reference to federal taxation, loans, and financial administration, currency legislation and the development of banking institutions.

159. The Geography and History of Commerce. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Huntington.

A study of the basis and development of commerce in the chief commercial nations. Present and prospective leadership among commercial nations and the factors contributing to it. Regulation of commerce by the state and local governments.

NOTE: Additional courses in geography may be found listed in the Department of Geology and in the Bulletin of the College of Commerce and Journalism.

***160. International Commercial Policies.** Three credit hours. First semester. Prerequisite, Economics 101-102.

Theory of international trade; historic policies, mercantilism, free trade, and protection. A study of the tariff policy of the United States, with a comparative study of the policies of the British Empire, France, and Germany. Tariff reform. The merchant marine question.

165. Labor Legislation. Three credit hours. First semester. Prerequisite, Economics 101-102. Mr. Hammond.

A study of the labor laws of the United States and of the principal foreign countries, with reference to their social and economic causes and effects.

166. Industrial Relations. Three credit hours. Second semester. Prerequisite, Economics 101-102. Mr. Hammond.

An account of the labor movement at home and abroad. Special attention is given to the policies of organized labor in the United States. The progress of collective bargaining and trade agreements. Recent efforts to secure an increased participation of labor in the work of industrial management and to develop friendly relations between employers and employed.

181-182. Economic History of the United States. Three credit hours. The year. Prerequisite, Economics 101-102. Mr. Walradt.

The development of agriculture, trade, and manufactures from the comparatively simple system of colonial days to the complex economic organization of the present.

The course endeavors to point out the interrelation which exists between this development and the various economic and social problems which have risen.

FOR GRADUATES

201-202. History of Economic Thought.

207-208. Seminary in Economics.

209-210. Research in Corporations and Labor.

211-212. Research in Transportation and Public Utilities.

213-214. Research in Banking and Finance.

*Not given in 1921-1922.

217-218. Research in Economic Theory.

219-220. Modern Economic Theories.

221-222. French and German Economists.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SOCIOLOGY

The following courses are open only to advanced undergraduates and graduates: 104, 131, 134, 201, 202, 207, 208.

101-102. Principles of Sociology. Three credit hours. The year. Not open to Freshmen. Mr. Hagerty, Mr. North, Miss Mark, Mr. Lumley, Mr. Clarke, and department assistants.

A study of the fundamental principles of sociology. Text-book, lectures, collateral reading, and individual investigation.

Sociology 101 is given also during the second semester.

Sociology 102 is given also during the first semester.

104. The Immigrant. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Clarke.

The causes and sources of migration, the characteristics and standard of living of the immigrant; immigration laws.

107. The Family. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101-102. Mr. Lumley.

A study of the matrimonial institutions and family organization in primitive society. The evolution of marriage and the family through Greek, Roman, and Medieval periods. The modern family, its functions and its problems.

123. Physical Anthropology. Three credit hours. First semester. Not open to Freshmen. Mr. Lumley.

Man's essential characteristics, his relation to the animal kingdom, antiquity, the criteria of race distinction, the several races.

124. Social Anthropology. Three credit hours. Second semester. Not open to Freshmen. Mr. Lumley.

Cultural beginnings; tools, implements, and weapons; fire, domestication of animals; habitations; clothing and ornamenta-

tions; property; language; slavery; cannibalism; secret societies; sports; religion. Textbooks, papers, lectures, and discussions.

127. Leisure and Recreation. Three credit hours. First semester. Prerequisite or concurrent, Sociology 101.

The sources of leisure in early and modern society. The social significance and uses of leisure. The social functions of play. Historical aspects of play. The recreation problem of modern communities from the standpoint of control and of public provision. Recreation surveys.

128. Social Organization and Administration of Recreation Facilities. Three credit hours. Second semester. Prerequisite, Sociology 127.

Methods and means of control of commercialized recreation with especial reference to American cities and towns. The promotion and organization of public and semi-public agencies. The administrative control of playgrounds, social centers, clubs, and other non-commercialized agencies. The coordination of the recreation facilities of the community.

131. The Criminal. Three credit hours. First semester. Prerequisite, Sociology 101-102. Mr. Hagerty.

The social, economic, and physiological causes of crime. The changing character of crime as modified by the legal code. Types of criminals, the instinctive, habitual, professional, etc. The classical and positive schools of criminology. The relation of feeble-mindedness and degeneracy to crime. Juvenile crime, its causes and prevention.

134. American Race Problems. Three credit hours. Second semester. Prerequisite, Sociology 101-102. Mr. Clarke.

Characteristics of the Negro, the Indian, the Mexican, and the Oriental; problems of assimilation.

141-142. Principles of Sociology. Three credit hours. The year. Mr. Clarke.

This course meets the same requirements as Sociology 101-102. Designed to develop sociological principles by observation and induction.

The number of students admitted to this course is limited to thirty.

FOR GRADUATES

- 201-202. Advanced Sociology,
- 207-208. Seminary in Sociology.
- 209-210. Administration of Social Agencies.
- 215-216. Research in Social Statistics.

For other courses in this department see the Bulletin of the College of Commerce and Journalism.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENGINEERING DRAWING

Office, 204 Brown Hall

PROFESSORS FRENCH AND MEIKLEJOHN, ASSISTANT PROFESSORS WILLIAMS, TURNBULL, AND SVENSEN, MR. FIELD, MR. PAFFENBARGER, MR. YERGES, AND DEPARTMENT ASSISTANTS

101. Elementary Mechanical Drawing. Two credit hours. Either semester. Mr. French and department assistants.

Practice in the use of drawing instruments, elementary projections.

102. Mechanical Drawing. Three credit hours. Either semester. Prerequisite, Engineering Drawing 101 or 139. Mr. French and department assistants.

103. Descriptive Geometry. Three credit hours. First semester. Two recitations and one two-hour drawing period each week. Prerequisite, Engineering Drawing 102. Mr. French and department assistants.

104. Machine Drawing. Three credit hours. Second semester. One lecture and two two-hour drawing periods each week. Prerequisite, Engineering Drawing 103. Mr. Williams, Mr. Svensen.

139. Drawing for Manual Arts Teachers. Four credit hours. First semester. Industrial Education, first year.

140. Drawing for Manual Arts Teachers. Three credit hours. Second semester. Industrial Education, first year. Prerequisite, Engineering Drawing 139.

131-132. The Teaching of Mechanical Drawing. Three credit hours. The year.

This course includes lettering in design.

ENGLISH

Office, 103 Physics Building

PROFESSORS DENNEY, TAYLOR, McKNIGHT, GRAVES, KETCHAM, AND BECK, ASSISTANT PROFESSORS ANDREWS AND PERCIVAL, MR. CRAIG, MR. WILEY, MISS DOLLINGER, MISS SNIFFEN, MR. BURNET, MISS HARBARGER, MR. SHIVELY, MR. FRENCH, MISS PEGG, MISS ROBINSON, MR. MILLER, MISS HAAS, MR. RAYMUND, AND DEPARTMENT ASSISTANTS

101. Paragraph Writing: Description and Narration. Two credit hours. Either semester. All instructors.

English 101 is given also in the Summer Session.

104. Paragraph Writing: Exposition and Argumentation. Two credit hours. Either semester. Prerequisite, English 101. All instructors.

English 104 is given also in the Summer Session.

105. Descriptive and Narrative Writing. Two credit hours. First semester. Prerequisites, English 101, 104. Mr. Beck, Mr. Craig.

The number admitted to this course is limited to thirty. Special permission necessary.

106. Expository Writing. Two credit hours. Second semester. Prerequisites, English 101, 104, 105. Mr. Beck, Mr. Craig.

The number admitted to this course is limited to thirty. Special permission necessary.

107. Advanced Composition. Two credit hours. First semester. Prerequisites, English 101, 104. Mr. Graves.

The number admitted to this course is limited to thirty. Special permission necessary.

108. Advanced Composition. Two credit hours. Second semester. Prerequisites, English 101, 104. Mr. Graves.

The number admitted to this course is limited to thirty. Special permission necessary.

127. History of the English Language. Two credit hours. First semester. No prerequisite course. Mr. McKnight.

Designed for students without a knowledge of Old and Middle English. The development of the language is traced by means of illustrative specimens. Attention is paid to the history of spelling and pronunciation, the changes in the meaning of words, and the origin of modern idioms.

128. English Words. Two credit hours. Second semester. No prerequisite course. Mr. McKnight.

Textbook: Greenough and Kittredge's Words and their Ways in English Speech.

133. Introduction to American Literature. Three credit hours. Either semester. No prerequisite course. Mr. Taylor, Mr. Graves.

Second semester, Mr. Beck.

The outline of the history will be given by lecture. The reading and criticism will be of Irving, Cooper, Bryant, and Poe; of Hawthorne, Emerson, Whittier, Longfellow, and Lowell; and of Walt Whitman; with a brief survey of recent literature.

141. Nineteenth Century Poetry. Three credit hours. First semester. No prerequisite course. Mr. Taylor, Mr. Andrews, Mr. Percival.

Wordsworth, Shelley, Keats, and their contemporaries.

142. Nineteenth Century Poetry. Three credit hours. Second semester. No prerequisite course. Mr. Taylor, Mr. Andrews, Mr. Percival.

Reading and criticism as far as possible complete of Tennyson and Browning. Some initial consideration will be undertaken of Fitzgerald, Arnold, Swinburne, Rossetti, Morris, and Meredith.

145. Nineteenth Century Prose. Three credit hours. First semester. No prerequisite course. Mr. Denney, Mr. McKnight, Mr. Graves, Mr. Beck.

Reading in Coleridge, Lamb, Landor, DeQuincey, Hazlitt, and Carlyle.

146. **Nineteenth Century Prose.** Three credit hours. Second semester. No prerequisite course. Mr. Denney, Mr. McKnight, Mr. Graves, Mr. Beck.

Reading in Arnold, Ruskin, Newman, Pater, Stevenson, and in recent and contemporary essayists.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

136. **Eighteenth Century Poetry and Prose.** Three credit hours. First semester. Prerequisite, ten hours of English. Mr. Percival.

A study of the classical, romantic, realistic, and sentimental literature of the eighteenth century. Representative prose, poetry, and drama.

137. **The Life and Times of Dr. Samuel Johnson.** Three credit hours. Second semester. Prerequisite, English 136. Mr. Percival.

A study of the life of Dr. Johnson, and of the manners and currents of opinion of his time, based principally on Boswell's *Life of Johnson* but supplemented by readings in the *Letters of Horace Walpole* and the *Journal of John Wesley*, and by various essays on eighteenth century topics.

157. **Versification.** Three credit hours. First semester. This course is limited to thirty members. Open only to Juniors and Seniors. Special permission necessary. The course should be preceded by a year-course in poetry. Mr. Graves.

The theory of verse structure with a history of the principal English rhythms, and practice in verse composition.

159. **Milton and his Contemporaries.** Two credit hours. First semester. Prerequisite, fourteen hours of English. Mr. Andrews.

Jacobean and Caroline literature with special reference to Milton. The drama of Beaumont and Fletcher and Jonson, the poetry of Milton, Donne, the cavaliers, and the church poets, and the prose of Walton, Howell, and the character books.

160. **The Age of Dryden.** Two credit hours. Second semester. Prerequisite, fourteen hours of English. Mr. Andrews.

Literature after the Restoration. "Paradise Lost," the poetry of Butler and Dryden; the plays of Wycherley, Congreve,

Farquhar, and Dryden; the prose of Browne, Burton, Pepys, and Bunyan.

167. **Shakespeare: Histories and Tragedies.** Three credit hours. First semester. Prerequisite, fourteen hours of English. Mr. Denney.

168. **Shakespeare: Comedies and Romances.** Three credit hours. Second semester. Prerequisite, fourteen hours of English. Mr. Denney.

181. **The Teaching of English.** Two credit hours. First semester. Prerequisite, ten hours of English. Mr. Denney.

FOR GRADUATES

201. **History of the Short Narrative in English.**

202. **The Lyric.**

*205. **History of Critical Theory.**

206. **Problems in the Drama.**

207. **The Later Novel.**

208. **The Later Poetry.**

*209. **English and Scottish Popular Ballads.**

210. **English Usage.**

212. **The Celtic Renaissance.**

215. **Studies in Seventeenth Century Literature.**

218. **Studies in Eighteenth Century Literature.**

219-220. **Discussion of Dissertations.**

221. **Early Popular Drama.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC SPEAKING

101. **Public Speaking.** Two credit hours. First semester. Prerequisites, English 101, 104. Mr. Ketcham, Mr. Wiley.

The principles of public speaking. The methods of securing the attention, and maintaining the interest of an audience. Practice in the application of principles and methods to simple expository and argumentative addresses.

*Not given in 1921-1922.

102. Debating. Two credit hours. Second semester. Prerequisites, English 101, 104. Mr. Ketcham, Mr. Wiley.

Practice in making and presenting oral arguments. The theory and practice of argumentation and debate. Short class debates on subjects of current interest.

107-108. Advanced Argumentation and Debate. Three credit hours. The year. Prerequisite, consent of the instructor. Mr. Ketcham.

A study of the great political and legal debates. Special applications of logic to argument. Practice in drawing briefs and presenting oral arguments on political and legal problems.

110. Advanced Debate Practice. Two credit hours. Second semester. Two practice periods each week. Prerequisite, consent of the instructor. Mr. Ketcham.

An advanced course for students showing special ability in debate.

114. Extempore Speaking. Two credit hours. Second semester. Prerequisite, Public Speaking 102. Mr. Wiley.

Practice in gathering and arranging speech material for extemporaneous addresses. Special exercises for developing clearness, concreteness, connotation, unity, and movement in extemporaneous speaking.

***121-122. Masters of Public Address.** Two credit hours. The year. May be taken with Public Speaking 101 and 102, but may not precede them. Given biennially. Mr. Ketcham.

Consideration will be given to the life of the speaker, the events leading up to his principal public addresses, his subject matter and its treatment, and his influence. The studies will include Demosthenes, Cicero, Burke, Erskine, Gladstone, Henry, Webster, Clay, Calhoun, Lincoln, Beecher, and Phillips. Lectures, readings, and reports.

125-126. The Forms of Public Address. Two credit hours. The year. Prerequisites, Public Speaking 101, 102. Mr. Ketcham.

A study of the methods of the foremost American and English orators. Class discussions. Practice in the use of different forms of public address. Formal orations; inaugurals; nominat-

*Not given in 1921-1922.

ing speeches; after dinner speaking; discussions of current events; political, business, and social addresses.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

151-152. Special Problems in the Theory of Public Speaking. Two credit hours. The year. Prerequisites, Public Speaking 101, 102 and four additional credit hours in public speaking. Given biennially. Mr. Ketcham.

The function of the public speaker in reforms, revolutions, and public movements. Criticism and appreciation. Ideals and aesthetic standards in public speaking. Each student is required to make investigations in some special problem and to bring his results before the class for discussion.

EUROPEAN HISTORY

Office, 305 University Hall

PROFESSORS SIEBERT AND McNEAL, ASSISTANT PROFESSORS
WASHBURNE AND KNIPPING, MR. BURROUGHS, MR.
NOYES, MR. STUCKERT, MR. GREER

101. Medieval History. Three credit hours. First semester. All instructors.

European History 101 is given also during the second semester.

102. Modern History from 1500 A. D. Three credit hours. Second semester. All instructors.

European History 102 is given also during the first semester.

103-104. History of England. Three credit hours. The year. No prerequisite for second, third, and fourth year students. Mr. Noyes.

A general course intended for all students wishing to obtain a general survey of the subject, also for those specializing in English literature or American history, and for those preparing to teach history in secondary schools.

105. Greek History. Three credit hours. First semester. No prerequisite for second, third, and fourth year students. Mr. Knipping.

106. Roman History. Three credit hours. Second semester. No prerequisite for second, third, and fourth year students. Mr. Knipfing.

***119-120. History of Germany.** Two credit hours. The year. No prerequisite for second, third, and fourth year students. Mr. McNeal.

The history of Germany since 1648, with especial emphasis on the rise of Prussia, and Germany in the 19th century.

121-122. History of France. Two credit hours. The year. No prerequisite for second, third, and fourth year students. Mr. McNeal.

The history of France from the accession of Louis XIV, with especial emphasis on the French Revolution, Napoleon, and France in the 19th century.

131-132. The World War: its Causes, Issues, and Results. Three credit hours. The year. Not open to Freshmen. Mr. Washburne.

This course deals with the remote and immediate underlying causes of the Great War, the issues involved among the nations, with special emphasis on the relation of the United States to the conflict, the problems and issues in its settlement, and the consequent national and international reconstruction.

While not required it is suggested that a collegiate course in European history, or American history, or political science may with advantage precede this course.

A survey of economic, social, and intellectual progress in ancient, medieval, and modern Europe.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

107-108. Medieval Civilization. Two credit hours. The year. Prerequisites, European History 101 and 102; advanced students from other departments admitted without the prerequisite on consent of the instructor. Mr. McNeal.

The civilization of the twelfth and thirteenth centuries, viewed as the product of two forces, feudalism and the church. Topics: Feudal and manorial institutions, customs and ideals of feudal society, languages and literature of the age of chivalry,

*Not given in 1921-1922.

religious and moral system of the church, the monastery schools, the universities, the scholastic system, cathedrals, religious drama. Reading as far as practicable in contemporary sources. Lectures, reading, investigation of special topics.

109. The Age of the Renaissance, 1250 to 1500 A. D. Two credit hours. First semester. Prerequisites, European History 101, 102. Mr. Siebert.

The rise of our modern civilization, treating of the revival of letters and art, the spread of education, the early development of modern science, the geographical discoveries, and the political, social, and ecclesiastical changes which occurred during the same period.

110. The Period of the Reformation. Two credit hours. Second semester. Prerequisites, European History 101, 102. Mr. Siebert.

Reformational movements from the death of Dante (1321) to the end of the Council of Trent (1563).

118. Europe and Asia: The Far Eastern Question. Two credit hours. Second semester. Prerequisites, European History 101 and 102. Mr. Siebert.

Outlines of the history of China and Japan. The origin and development of the interests of the European States in the Far East. Textbooks, readings, and lectures.

123-124. Europe from 1815 to 1920. Three credit hours. The year. Prerequisites, European History 101, 102. Mr. Noyes.

The history of Central and Western Europe from the close of the French Revolution to the present time, with especial emphasis on the past fifty years and the interpretation of recent events in Europe.

125-126. Ancient and Medieval Christianity. Three credit hours. The year. Prerequisites, European History 101 and 102.

A detailed survey of the institutions, ideas, and inner life of Christianity, with special emphasis on the primitive and ancient period. Religion is treated objectively as a phase of the cultural and spiritual development of the people of Western Europe. Lectures, collateral reading, and reports.

129-130. Historical Literature and Method. Two credit hours. The year. Two lectures each week. Prerequisites, European History 101, 102 and at least one other year-course in the department. Mr. Siebert, Mr. McNeal, Mr. Knipfing.

An introduction to the chief sources for the various divisions and periods of European history, and a characterization of the principal secondary authorities. Exercises in historical bibliography and method. Designed for students specializing in European history.

***137. The Early Middle Age.** Two credit hours. First semester. Prerequisites, European History 101 and 102. Mr. McNeal.

History of Western Europe from the Germanic invasions to the tenth century; special emphasis on the age of Charlemagne. Reading in contemporary sources as well as in authorities. Lectures, reading, investigation of special topics.

***138. The Feudal Age.** Two credit hours. Second semester. Prerequisites, European History 101 and 102. Mr. McNeal.

History of Western Europe, 1000 to 1300. Political characteristics of feudal society, beginnings of national states, conflict of popes and emperors, crusades, development of commerce and rise of cities. Reading in contemporary sources as well as in authorities. Lectures, reading, investigation of special topics.

***139. Non-Christian Religions in the Roman Empire.** Two credit hours. First semester. Prerequisites, European History 105 and 106. The topical method. Conference and reports.

The decay of paganism. Stoicism, Epicureanism, oriental cults, Gnosticism, Neo-Platonism. Their relation to Christianity. The imperial cultus.

141-142. The History of the Expansion of Europe. Three credit hours. The year. Prerequisites, European History 101, 102. Mr. Washburne.

A study of the contact of Europeans with the peoples of Asia, Africa, and the Western Hemisphere, and the resultant struggle for commercial and colonial supremacy between the Anglo-Saxon, and the Spaniard, Dutch, French, and in our own time, the Teuton. The influence of the spread of European

*Not given in 1921-1922.

civilization and the reaction upon the countries of Western Europe. Lectures, discussions, reports.

***143-144. The History of the Slavic Peoples of Europe.** Two credit hours. The year. Prerequisites, European History 101 and 102. Mr. Siebert.

145-146. Hellenic Civilization. Two credit hours. The year. Prerequisites, European History 105 and 106. The topical method. Conferences and reports.

A detailed investigation seeking to determine the causal antecedents, the characteristics and limitations, the decline and the transmission of Hellenic and Hellenistic culture. All phases of the social, intellectual, artistic, and spiritual life will be interpreted historically.

***148. Ancient Imperialism.** Two credit hours. Second semester. Prerequisites, European History 105 and 106. The topical method. Conferences and reports.

A study of the constitutional developments of the Graeco-Roman world. The city states, democracy, federation, and imperialism.

152. The Teaching of European History. Two credit hours. Second semester. Mr. Siebert.

This course will most naturally be taken as a continuation of American History 121 (Teachers' Course), the two semesters forming a year's course for the special training of history teachers in secondary schools. Prerequisites, European History 101 and 102, and either European History 103-104 (English History), or European History 105 and 106 (Greek and Roman History). Required of all who expect to ask the department for recommendation to teaching positions.

153-154. England in the Tudor and Stuart Period. Three credit hours. The year. Prerequisites, European History 101 and 102 and European History 103-104 or American History 101-102. Mr. Noyes.

For advanced students in European or American History. An intensive study of the constitutional reaction of the Tudor era, the opening of the contest for the recovery of constitutional rights, culminating in the "Glorious Revolution" and the begin-

*Not given in 1921-1922.

nings of parliamentary government. Special consideration of the British settlements in North America as part of the British Empire and the problems presented, phases of English history directly affecting them, as the Reformation, political theories, commercial policies, county and parish governments, protection of the frontiers of the empire, etc. Lectures, readings, and reports.

***155-156. History of England from the Reform Bill of 1832 to the Present.** Three credit hours. The year. Prerequisites, European History 101 and 102 and 103-104. (Other advanced students by permission.) Mr. Noyes.

England at the opening of the 19th century, the results of the Industrial Revolution and the movement for reform, partially successful in the Reform Bill of 1832; the Victorian Age, the development of a new era in democracy and the progressive legislation of 1867 and the year following; achievements of the period and problems arising. Special reference to foreign affairs leading up to the Great War, England's part in the same, and problems of reconstruction. Consideration of representative men of the period, as Canning, Peel, Palmerston, Disraeli, Gladstone, Asquith, Lloyd George. Lectures, readings, topics.

FOR GRADUATES

203-204. Seminary in European History.

For description of graduate courses in this department see the Bulletin of the Graduate School.

FRENCH

(See Romance Languages and Literatures)

GEOLOGY

Office, 103 Orton Hall

PROFESSORS BOWNOCKER AND CARMAN, ASSISTANT PROFESSOR
PEATTIE, MR. LAMBORN, MISS MORNINGSTAR, MR. WEBB,
AND DEPARTMENT ASSISTANTS

119-120. General Geology. Four credit hours. The year. Three recitations and one laboratory period of two hours each

*Not given in 1921-1922.

week. Occasional field trips on Saturday. This is the first course in geology. Mr. Bownocker, Mr. Peattie, Mr. Webb.

An elementary study of minerals and rocks; of the surface and crustal features of the earth; of the geological history of the earth; of the ocean and of the atmosphere.

103. Structural and Dynamical Geology. Three credit hours. First semester. Prerequisite, Geology 101-102 or 119-120. Mr. Carman.

A detailed study of the structural features of the earth's crust and of the forces which have produced these structures. This course will include much drill in the interpretation of geological maps.

104. Historical Geology. Three credit hours. Second semester. Recitations, lectures, laboratory, and field trips. Prerequisite, Geology 103. Mr. Carman.

A study of the geological history of North America, its physical history, life development and structure. The course deals with the classification and distribution of the geological formations, especially those of Ohio, and with the characteristic fossils of each system. During the second half of the semester there will be several field trips on Saturdays.

***115. Physiography.** Three credit hours. First semester. Recitations, lectures, and laboratory. Prerequisite, Geology 101-102 or 119-120. Mr. Webb.

A study of the origin and history of physiographic features of the earth's surface, including detailed analysis of processes involved in stream work, glaciation, and the evolution of shore lines.

121. Introduction to Geography. Three credit hours. First semester. Lectures, assigned reading, and laboratory. Mr. Peattie.

The fundamental principles of geography. An introductory study of the relation of the lithosphere, hydrosphere, and atmosphere to life, especially the life of man.

122. Geography of North America. Three credit hours. Second semester. Lectures, assigned reading, and laboratory. Prerequisite, Geology 121. Mr. Peattie.

*Not given in 1921-1922.

North America in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the North American people.

***124. Physical and Regional Geography of Europe.** Three credit hours. Second semester. Lectures, assigned reading, and laboratory. Prerequisite, Geology 121. Mr. Peattie.

Europe in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the European people. Offered in 1922-1923.

***125. Geography of Asia.** Three credit hours. First semester. Lectures, assigned reading, and laboratory. Prerequisite, Geology 121. Mr. Peattie.

Asia in its relation to the rest of the world. Its physical features, climate, and natural resources and their relation to the life and development of the Asiatic people, especially the people of India, China, Japan, and Siberia.

128. The Teaching of Geography. Three credit hours. Second semester. Lectures, assigned reading, laboratory, and field work. The field work will replace laboratory when given. Mr. Peattie.

The subject matter of geography will be used to develop appropriate methods of teaching the subject in the elementary and secondary schools.

NOTE: Additional courses in geography may be found listed in the Department of Economics and Sociology.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105. Stratigraphic Geology of Ohio. Three credit hours. First semester. Prerequisite, Geology 103-104 or 119-120. Mr. Carman.

Field trips, laboratory work, lectures, and assigned readings. Field trips on Saturdays (entire day) while the weather permits.

The geological formations of central Ohio are studied in the field and those formations more distant from Columbus

*Not given in 1921-1922.

are studied by rock specimens and assigned readings. This course is intended to acquaint the student with the ordinary methods of field investigations, such as the measurement and description of geological sections, the making of geological maps, the collection and identification of specimens, and the preparation of reports describing the regions studied.

116. Physiography of the United States. Three credit hours. First semester. Prerequisite, Geology 101-102 or 119-120, 115. Lectures, assigned readings, and laboratory. Mr. Webb.

A study of each large physiographic province of the United States with a detailed description and analysis of the present topography.

106. Glacial Geology. Three credit hours. Second semester. Prerequisite, Geology 101-102 or 119-120. Mr. Webb.

A study of the glacial geology of North America. The first half of the semester will be given to lectures, assigned readings, and map work; the second half, largely to field work and the preparation of reports, the field work being on Saturdays.

FOR GRADUATES

201-202. Advanced Historical Geology.

203-204. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GERMAN

Office, 317 University Hall

PROFESSORS M. B. EVANS, EISENLOHR, AND BLOOMFIELD,
ASSISTANT PROFESSOR THOMAS

The courses in German, beyond those of the first two years, are divided into three groups: literary, linguistic, and practice courses. The linguistic and practice courses are intended primarily for students who desire to make direct professional use of the language.

German 107-131 require as prerequisite German 104 or equivalent. A combination of German 131-132 with German 107-108 or 117-118 is advised. The prerequisite for the group "For Advanced Undergraduates and Graduates" is at least one year-course in the group 107-118 or the equivalent.

101-102. Elementary German. Four credit hours. The year. All instructors.

German 101 is given also during the second semester.

German 102 is given also during the first semester.

103. Intermediate German. Four credit hours. Either semester. Prerequisite, German 101-102 or two entrance units. Not open to students who enter with four entrance units in German. All instructors.

Reading of narrative prose; grammar review; prose composition.

104. Easy Classical Reading and Composition. Four credit hours. Either semester. Prerequisite, German 103 or three entrance units in German. Not open to students who enter with four entrance units in German. All instructors.

Reading of (a) a classical drama supplemented by discussions and lectures on the structure of the drama, its characters, and its historical background; (b) other literature of the classical period or of the nineteenth century; prose composition.

106. Science Reading. Four credit hours. Second semester. Prerequisite, German 103 or three entrance units in German.

Rapid reading of technical literature. This is preceded or accompanied by drill on word formation, word compounds, and sentence structure. The object of the course is to enable the student to read German technical literature.

107-108. Advanced German. Four credit hours. The year. Mr. Eisenlohr.

A rapid reading course. Throughout the year practice in speaking and writing German. First semester: Nineteenth Century Novel. Second semester: Nineteenth Century Drama.

117-118. Schiller: Introduction to Life and Works. Two credit hours. The year. Miss Thomas.

First semester: Gedichte, Don Carlos, Braut von Messina. Second semester: Wallenstein, Dreissigjaehriger Krieg.

131-132. Conversation and Prose Composition. Two credit hours. The year. Prerequisite, consent of the instructor.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

The attention of advanced students is called to the History of Germany (Course 119-120) offered by the Department of European History.

***173. The Teaching of German.** Two credit hours. First semester. Mr. Evans.

A critical study of the methods of teaching modern foreign languages. Lectures, reports, and practice teaching. Open only to Seniors and graduate students.

179-180. Proseminary: Eighteenth and Nineteenth Century Literature. Two or four credit hours. The year. Mr. Eisenlohr, Mr. Evans.

The course will be divided into two two-hour sections, which may be taken together or separately. The list of authors to be studied will vary from year to year. For 1921-1922 the selection will be:

First semester—

179a, Lessing: Emilia Galotti, Nathan der Weise, Hamburg Dramaturgy (Selections). Mr. Eisenlohr.

179b, Goethe: Faust. Mr. Evans.

Second semester—

180a, Scheffel: Ekkehard, Trompeter von Saekkingen. Mr. Eisenlohr.

180b, Hauptmann: selected dramas and a study of recent tendencies in German drama. Mr. Evans.

This course is intended to serve as an introduction to a more intensive study of German literature. There will be informal lectures in German and English, discussions, and reports; also practice in speaking and writing German.

175. Phonetics. Two credit hours. First semester. No prerequisites. Not open to Freshmen and Sophomores. Mr. Bloomfield.

Speech sounds with special reference to German, French, and English.

181-182. Minor Investigation. Two credit hours. The year. Prerequisite, at least two year-courses in the group for advanced undergraduates and graduates. Mr. Evans, Mr. Eisenlohr, Mr. Bloomfield, Miss Thomas.

*Not given in 1921-1922.

Investigation of minor problems in the various fields of German literature and philology.

FOR GRADUATES

*201-202. Advanced Middle High German.

*203. Gothic.

*204. Old High German.

*212. Methodology.

*214. Experimental Phonetics.

215-216. Seminary in German Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

GREEK LANGUAGE AND LITERATURE

Office, 200A University Hall

PROFESSOR BOLLING

101-102. Elementary Greek. Four credit hours. The year. Mr. Bolling.

115-116. Greek Art. Two credit hours. The year. No prerequisite. Mr. Bolling.

Greek 115 is not a prerequisite for Greek 116.

Lectures on architecture, sculpture and vases, and on Pre-Hellenic antiquities. A knowledge of Greek is not required.

125. Plato. Four credit hours. First semester. Prerequisite, Greek 101-102. Mr. Bolling.

Readings in the shorter dialogues; exercises in Greek prose.

126. Homer. Four credit hours. Second semester. Prerequisite, Greek 125. Mr. Bolling.

Readings in the Iliad: exercises in Greek prose.

129-130. Attic Orators, Drama or Plato. Three credit hours. The year. Prerequisites, Greek 125, 126.

131-132. Greek Prose Composition. One credit hour. The year. Prerequisites, Greek 125, 126.

*Not given in 1921-1922.

***123-124. Life and Literature of the Greeks.** Two credit hours. The year. No prerequisite. Mr. Bolling.

Lectures on private life; on epic, lyric, and dramatic poetry; on the historians, the philosophers, and the orators.

133-134. Life and Literature of the Greeks. Two credit hours. The year. No prerequisites. Mr. Bolling.

These courses consist partly of lectures, and partly of assigned reading in translations from the Greek epic and lyric poets and historians (123-124) alternating each year with a similar treatment (133-134) of the tragic and comic poets, the philosophers, and the orators.

A knowledge of Greek is not required and the work may be begun in any semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

141. Principles of the Historical Study of Language. Two credit hours. First semester. No prerequisite. Mr. Bolling.

Lectures on the elements of linguistic science, together with an outline of the Indo-European family of languages.

121-122. Historical Greek Grammar. Two to four credit hours, according to the needs of applicants. The year. Mr. Bolling.

The development of the Greek language, especially in its relations to the other members of the Indo-European family. This course does not presuppose any knowledge of Greek. Open to advanced undergraduates and graduates pursuing language as a major.

***127-128. Proseminary in Greek.** Two credit hours. The year. Elective. Prerequisite, one year of elementary Greek and the equivalent of at least four semester courses of college Greek. Mr. Bolling.

151-152. Readings and Lectures. Two to four credit hours. The year. Mr. Bolling.

Study of the language, style, and works of some author or group of authors chosen each year to meet the particular needs of the class.

Courses 115-116, 121-122, 123-124, 133-134 are planned to meet the needs of students who have no knowledge of Greek.

*Not given in 1921-1922.

HISTORY AND PHILOSOPHY OF EDUCATION

Office, 100 Hayes Hall

PROFESSOR ANDERSON

101-102. History of Education. Three credit hours. The year. Prerequisite, one year's work in European history, philosophy, or psychology. Mr. Anderson.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103-104. Philosophy of Education. Two credit hours. The year. Prerequisites, History of Education 101-102, Psychology 101-102, and Philosophy 151-152. Mr. Anderson.

***105-106. Educational Classics.** Two credit hours. The year. Prerequisites, History of Education 101-102, Psychology 101-102. Mr. Anderson.

Readings in Plato, Aristotle, Quintilian, Montaigne, Locke, Rousseau, Pestalozzi, Herbart, Froebel, and Spencer. Reports and conferences.

107-108. Comparative Education. Two credit hours. The year. Prerequisite, consent of the instructor. Mr. Anderson.

A survey (with historical introduction) of existing systems of elementary and secondary education in Germany, France, Denmark, England, and the United States.

109-110. History of Education in the United States. Two credit hours. The year. Prerequisite, History of Education 101-102. Mr. Anderson.

***112. History of Industrial Education.** Two credit hours. Second semester. Prerequisite, History of Education 101-102 or equivalent. Open to Seniors and graduates only. Mr. Anderson.

113. History of the American High School. Two credit hours. First semester.

An historical and comparative study.

116. Present-Day Problems in Education. Two credit hours. Second semester.

A review of the most urgent of existing problems in elementary and secondary school education in the light of their origin and historical development.

*Not given in 1921-1922.

FOR GRADUATES

201-202. Seminary in the History of Education.

203-204. Seminary in Educational Philosophy.

206. A Special Survey of Source Materials and of General Literature in the Field of the History of Education.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HOME ECONOMICS

Office, 120 Home Economics Building

PROFESSOR LANMAN, ASSISTANT PROFESSORS ADAMS, WALKER, FINLEY, AND SHELOW, MISS McGUIRE, MISS LINDER, MISS DONNELLY, MISS BUTLER, MISS HAMBLIN, MISS BOOTH, AND DEPARTMENT ASSISTANTS

101-102. Foods. Five credit hours. The year. Two lectures, one quiz, and two laboratory periods each week. Prerequisite, Chemistry 106 or 110.

A study of the principles involved in the selection and preparation of foods; the occurrence, cost, and value of the nutrients in the various food materials.

104. Sanitation. Three credit hours. Either semester. Three lectures each week. Prerequisite or concurrent, Bacteriology 107. Miss Linder.

A study of the interdependence of home and public agencies in securing and promoting sanitary and hygienic measures; location and construction of the house, water supply, plumbing, heating, ventilation, lighting, and home nursing.

111-112. Textiles. Two credit hours. The year. One lecture and one laboratory period each week. Prerequisite or concurrent, Art 119. Mrs. Walker.

The study of fibers and fabrics from a historic, economic, and social standpoint. In the laboratory the making of garments involves the proper selection of material, the working out of suitable designs, and a comparison with commercially prepared articles.

Students having had previous work should consult with the instructor.

113. Dress. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisite, Home Economics 111-112, and Art 121 prerequisite or concurrent.

A study of the relation of economics, hygiene, and art to clothing. The drafting and designing of patterns, the selection of materials, and garment construction.

116. Dress. Three credit hours. Second semester. One lecture and two laboratory periods each week.

Continuation and amplification of Home Economics 113.

Outline of history of costume and continuation of the study of selection and combination of materials in their application to dress.

The lecture may be taken as a one-hour course without the laboratory.

118. The House. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisites, Art 131, Home Economics 112, Home Economics 104, Economics 101, Art 141, either prerequisite or concurrent. Miss Donnelly.

A study of the evolution of the house and the principles underlying house arrangement, furnishing, and decoration.

119. Household Management. Four credit hours. Either semester. Three lectures each week. Continuation of 118. Prerequisites, Economics 102, Art 141, Home Economics 102, 118, 104, or 110. Mrs. Walker.

A study of the organization and management of the household with a view to securing the maximum of family welfare. Time is given to a consideration of the problems of expenditures through study of relative values, examination of budgets, and discussion of some of the factors influencing choice.

The Home Economics practice apartment where the students live in groups for a period of time, affords opportunity for practice in household management.

121. Food Problems. Three credit hours. Either semester. One lecture and two laboratory periods each week. Prerequisites, Chemistry 106 or 110, Home Economics 101-102, and consent of the instructor.

Problems of markets, fuels, equipment, and labor involved in selection, purchase, preparation, and service of food.

127. Special Methods. Three credit hours. First semester. Prerequisites, Home Economics 101, 102, 111, 112, Psychology 101. Mrs. Adams.

This course is designed for students intending to teach Home Economics. Survey of Home Economics, examination of courses of study, planning of lessons, study of various types of schools and methods for teaching the special phases of Home Economics work. Observations of such schools in operation. Two lecture hours each week and observation trips are required.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105-106. Special Problems in Home Economics. Two to five credit hours. Course 105 is given either semester, 106 the second semester. One lecture each week. Prerequisite, eighteen hours of required Home Economics work; the consent of the instructor must be obtained in order to take 106.

Readings and reports on Home Economics topics. Problems assigned for individual study.

110. Dietetics. Four credit hours. Either semester. Two lectures and two laboratory periods each week. Prerequisites, Home Economics 101-102, Physiology 101-102, Agricultural Chemistry 123-124.

A study of the chemical, physiological and economic factors entering into the normal diet. Examination of dietary standards. Some attention to abnormal diet is given. Translation of standard dietaries into food materials and some exercise in making dietary studies and in preparing food for the sick.

FOR GRADUATES

201-202. Research Course.

For description of graduate courses in this department see the Bulletin of the Graduate School.

HORTICULTURE AND FORESTRY

Office, 118 Horticulture Building

ASSISTANT PROFESSOR SCHERER

184. Principles of Forestry. Three credit hours. Second semester. Three lectures with occasional recitations. Elective. Mr. Scherer.

This course is intended as a bird's-eye view of the objects and purposes of forestry; the problems it has to solve; the conditions necessary for its success; the materials with which it has to work and the technical terms peculiar to it—all serving to introduce the student to a broad glimpse of the profession. It is planned to acquaint the student with the conditions necessary for tree growth; the factors influencing the distribution of forests; different types of forests; distribution of forests over the world; the exploitation and yield in different forest products and their relative importance. Adapted to students of other departments.

INDUSTRIAL EDUCATION

(MANUAL TRAINING)

Office, 212 Shops Building

PROFESSOR USRY, MR. SMITH

112. Materials and Methods. Three credit hours. Second semester. Industrial Education, fourth year.

Organization, supplies, courses of study, methods of presentation of subject, general procedure.

117-118. Constructive Design. Two credit hours. The year. Industrial Education, third year. Prerequisite, Shopwork 133 or its equivalent.

Practical problems in the design and construction of projects in wood; the properties of various woods; suitability of material to project. These problems will cover work in the upper elementary grades and the secondary school.

125. Elementary Woodwork. Two credit hours. Second semester. Industrial Education, first year. Mr. Usry, Mr. Smith.

Formerly Shopwork 133.

127-128. Wood Turning and Pattern Making. Three credit hours. The year. Industrial Education, second year. Prerequisite, Industrial Education 125. Mr. Usry, Mr. Smith.

Formerly Shopwork 129-130.

129. Cabinet Making. Three credit hours. Either semester. Industrial Education, third year. Prerequisite, Industrial Education 125 or Shopwork 101. Mr. Usry, Mr. Smith.

Formerly Shopwork 113.

131. Advanced Cabinet Work. Three credit hours. First semester. Optional, Industrial Education, fourth year. Prerequisite, Industrial Education 129. Mr. Usry, Mr. Smith.

Formerly Shopwork 131.

132. Shop Planning and Equipment. Three credit hours. Second semester. Industrial Education, fourth year.

Lectures and studies in planning and equipping the shop and in caring for the equipment. Industrial and school shops will be visited for the purpose of critical study.

133. Electrical Work and Pipe Fitting. Two credit hours. First semester. Industrial Education, third year.

The fundamental principles involved in elementary electrical construction and maintenance. The sanitary and practical applications of pipe fitting together with practical study of valves and special fittings. Lectures and laboratory work.

134. Sheet Metal Work. Two credit hours. Second semester. Industrial Education, third year.

Sheet metal layout and construction. Practice in bending, forming, riveting, soldering, etc.

135. Craftwork for Women. Two credit hours. Either semester. Primarily designed for women in Home Economics.

Lectures and laboratory work dealing with the materials that enter into the construction of the home and its furniture, the finishing of these materials and the care of the finish, together with opportunity for selection of problems for making and finishing.

136. Craftwork for Women. Two credit hours. Either semester. Prerequisite, Industrial Education 135.

An advanced course, following 135. Particular attention paid to the craftwork feature.

137. Methods Related to Agricultural Industry. Two credit hours. Second semester. Prerequisites, Shopwork 101 and 103 or equivalent.

A course in Industrial Education methods specifically related to the agricultural community.

138. Correlated Industrial Work. Two credit hours. Either semester. For students in Agricultural Education (Smith-Hughes), designed to give experience and practice in the type of industrial work that meets the need of repairs and construction on the farm.

111. Teaching of Manual Training. Three credit hours. First semester. Industrial Education, fourth year.

The history of manual training in our own and foreign countries; the Sloyd System, the Russian System, etc.; the trend of manual training, its weaknesses and its strength; how to avoid the weaknesses and build up the strength. Point of view in industrial and vocational education; the part-time, cooperative, and trade school; night and continuation schools.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123. Special Problems in Manual Training. Two credit hours. Either semester. For superintendents and principals. Mr. Usry.

Readings and discussions covering the general theory and the relation of manual training to the elementary and the secondary schools. Designed to make the superintendent or the principal thoroughly conversant with what ought to be expected from the work, equipment, cost, selection of teachers, salaries, and ways to help the teacher in service. Open to Seniors or graduates, or to men of experience acceptable to the instructor.

ITALIAN

(See Romance Languages and Literatures)

LATIN LANGUAGE AND LITERATURE

Office, 307 University Hall

PROFESSORS *DERBY, HODGMAN, AND ELDEN, MR. SMITH

147. **Elementary Latin.** Four credit hours. First semester. Mr. Smith.

Grammar and exercises. This course is offered to students who have not studied Latin.

148. **Elementary Latin.** Four credit hours. Second semester. Prerequisite, Latin 147. Mr. Smith.

Caesar, four books and exercises.

149. **Cicero, Orations.** Four credit hours. First semester. Prerequisites, Latin 147, 148 or their equivalent. Mr. Smith.

150. **Vergil, Aeneid.** Four credit hours. Second semester. Prerequisites, Latin 147-149 or their equivalent. Mr. Smith.

101. **Cicero, Livy, Horace, Aulus Gellius.** Four credit hours. First semester. Prerequisite, four units of preparatory Latin. Mr. Hodgman, Mr. Elden.

Cicero: *De Senectute* and *De Amicitia*; Livy; Horace: *Odes*; Aulus Gellius: *Selections*.

102. **Horace, Ovid, Livy, Sallust.** Four credit hours. Second semester. Prerequisite, Latin 101. Mr. Hodgman, Mr. Elden.

Horace: *Odes*; or Ovid: *Metamorphoses*; Livy or Sallust, or *Prose Composition*.

103. **Pliny or Cicero; Catullus or Tacitus.** Three credit hours. First semester. Prerequisites, Latin 101, 102. Mr. Hodgman, Mr. Elden.

Pliny or Cicero: *Selected letters*. Catullus or Tacitus.

104. **Latin Comedy.** Three credit hours. Second semester. Prerequisite, Latin 103. Mr. Hodgman, Mr. Elden.

Plautus and Terence, three plays.

105. **Roman Satire.** Two credit hours. First semester. Prerequisites, Latin 101-104. Mr. Elden.

Horace, Juvenal or Persius.

*Died March 28, 1921.

106. **Roman Philosophy and Rhetoric.** Two credit hours. Second semester. Prerequisites, Latin 101-104. Mr. Elden. Cicero and Quintilian.

107. **Roman Private Life.** Two credit hours. First semester. Prerequisites, Latin 101, 102.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109. **Roman Art and Achaeology.** Two credit hours. Second semester.

The course is open to undergraduates excepting Freshmen, and to graduates.

The development of the arts and crafts in Italy and especially of Roman architecture and the decorative arts. Open not only to students of Latin, but also to other students who are interested in the subject.

111-112. **Roman and Comparative Literature.** One credit hour. The year. Mr. Elden.

Lectures and assigned reading on Roman literature and its influence on modern writers. Open and useful not only to students of Latin, but also to those without a knowledge of Latin who desire to become acquainted with the broader outlines of Roman literature and its influence upon the literatures of France, Germany, and England.

113-114. **Proseminary.** Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Elden.

115-116. **Latin Prose Composition.** Three credit hours. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Latin 115-116 should ordinarily be preceded or accompanied by Latin 105-106 or 121-122.

Latin 113-116 are essential for those students who are preparing to teach Latin, and may be important for graduate students.

119-120. **Advanced Latin Composition.** One or two credit hours. The year. Prerequisite, Latin 115-116. Mr. Hodgman. Translation of English narrative and study of Latin idiom.

121. **Roman Prose Authors.** Two credit hours. First semester. Mr. Hodgman, Mr. Elden.

Cicero, Seneca, Quintilian, Suetonius, or Tacitus.

122. Roman Poets. Two credit hours. Second semester. Mr. Hodgman, Mr. Elden.

Plautus, Terence, Lucretius, Vergil, Ovid, Lucan, Statius, Martial, or Silius Italicus.

Latin 121-122 is designed to give an opportunity to read a considerable portion of the author chosen, and is open to advanced students only. At the option of the instructor, the study of one author may be continued during the year, or other authors used in either semester, or the class may earn more credit by meeting oftener, up to a total of five hours.

123-124. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Hodgman.

Sounds and inflections. Pronunciation, ablaut, vowel, and consonant changes—especially vowel weakening—accent, inflection, and other similar topics essential to the understanding of the principles which govern the development of the Latin language. This course should accompany Latin 115-116.

125-126. Historical Latin Grammar. One credit hour. The year. Prerequisites, Latin 101-104. Mr. Elden.

Syntax. Lectures on the problems connected with the origin and development of certain constructions in Latin syntax; a treatment along historical lines of the syntactic uses of the cases, modes, and tenses. Latin 123-126 are deemed essential for those who make Latin a major or minor subject of study in graduate work, and are recommended for advanced undergraduate study.

129. Methods of Teaching Latin. Two credit hours. First semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Lectures and assigned reading on methods of teaching Latin in the secondary schools. Place and value of Latin in education; schemes of courses; examination and criticism of textbooks; preparation of lessons; conduct of recitations; equipment; bibliography of books of reference, periodicals, etc.; illustrative exercises in the various topics of Latin grammar, and in the Latin authors used in high schools.

130. Practice in Reading at Sight. Two credit hours. Second semester. Prerequisite, two years of college Latin. Mr. Hodgman.

Instruction and practice in reading at sight, reports, topics for investigation, and other pertinent work.

***131-132. Roman Public Life.** One or two credit hours. The year. Prerequisite, Latin 103-104 or European History 106.

A brief survey of the development of Roman governmental institutions, with special attention to their functions and character during the late republic and early empire.

FOR GRADUATES

201-202. Roman Religion.

203-204. Medieval Latin.

***207-208. Seminary.**

213-214. Elements of Epigraphy and Palaeography.

***215-216. Roman Antiquities and Archaeology.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

MATHEMATICS

Office, 314 University Hall

PROFESSORS BOHANNAN, McCOARD, SWARTZEL, KUHN, RASOR, AND MORRIS, ASSOCIATE PROFESSOR ARNOLD, ASSISTANT PROFESSORS PRESTON, BAREIS, RIETZ, WEAVER, AND BEATTY, MISS RICKARD, MR. CARIS, MR. LE VEQUE

Students intending to make Mathematics a specialty are advised to secure a reading knowledge of French, German, and Italian by the beginning of the Junior year, and to take some courses in philosophy, particularly logic, in the Junior and Senior years.

121. College Algebra and Trigonometry. Three credit hours. First semester. Mr. Swartzel, Mr. Arnold.

122. Plane Trigonometry and Analytical Geometry. Three credit hours. Second semester. Mr. Swartzel, Mr. Arnold.

125-126. History of Elementary Mathematics. Two credit hours. The year. Prerequisite, Mathematics 128 or an equivalent. Mr. Arnold.

*Not given in 1921-1922.

Especially the history of algebra and geometry, including a brief survey of the history and teaching of these subjects in the United States.

127-128. Analytical Geometry and Calculus. Three credit hours. The year. Prerequisite, Mathematics 122 or 132. Mr. Kuhn.

129-130. Mathematics of Finance and Insurance. Three credit hours. The year. Prerequisite, Mathematics 121 or its equivalent.

The principles of interest and life insurance, together with such practical problems in investments, loans, etc., as may be of interest to the general student. Practice in the construction of financial schedules and tables and in the practical use of adding machines and other mechanical aids in arithmetical computation.

131. College Algebra and Trigonometry. Five credit hours. Either semester. Prerequisites, entrance algebra and geometry. All instructors.

132. Plane Trigonometry and Analytical Geometry. Five credit hours. Either semester. Prerequisite, Mathematics 131. All instructors.

141. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 122 or 132. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

142. Calculus. Five credit hours. Either semester. Prerequisite, Mathematics 141. Mr. Bohannon, Mr. McCoard, Mr. Swartzel, Mr. Kuhn, Mr. Rasor, Mr. Arnold, Miss Bareis, Miss Rickard.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Prerequisite: Differential and Integral Calculus.

163-164. Plane and Solid Analytical Geometry. Three credit hours. The year. Miss Bareis.

165-166. Advanced Calculus. Three credit hours. The year. Mr. Morris.

167-168. Differential Equations. Three credit hours. The year. Mr. Bohannon.

*171-172. Projective Geometry. Three credit hours. The year. Miss Bareis.

173-174. Modern Higher Algebra. Three credit hours. The year. Mr. Kuhn.

185. Fundamental Ideas of Algebra and Geometry. Two credit hours. First semester. Mr. Arnold.

To meet the needs of teachers of secondary mathematics. A course in content rather than in methods. To supplement and to critically review the previous work in these subjects. Those intending to take Mathematics 186 are advised to take this course.

186. The Teaching of Mathematics. Two credit hours. Second semester. Mr. Arnold.

A critical study of teaching mathematics. Especial attention is given to the problems of the secondary schools. Lectures, discussions, and practice teaching.

FOR GRADUATES

201-202. Theory of Functions of a Complex Variable.

203. Fourier's Series and Spherical Harmonics.

204. Vector Analysis and its Applications.

205-206. Calculus of Variations.

207. History of Mathematics.

209-210. Theory of Statistics.

211-212. Groups.

213-214. Differential Geometry.

215-216. Functions of a Real Variable.

217-218. Infinite Series and Products.

219-220. Theory of Numbers.

221-222. Theory of Invariants.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in, 1921-1922.

MILITARY SCIENCE AND TACTICS

Office, The Barracks

LIEUT. COLONEL LEONARD, LIEUT. COLONEL CONWAY (RETIRED),
MAJORS McLEAN, HANFORD, AND MURRAY, FIRST LIEUTENANTS
BENNER, KAUFFMAN, AND COX, ALL U. S. A., AND
DEPARTMENT ASSISTANTS

In accordance with the Morrill Act, passed in 1862, under which the University was established, military instruction must be included in the curriculum. The Board of Trustees therefore requires all male students, both special and regular, unless excused by the Military and Gymnasium Board, to drill during two years.

The Reserve Officers' Training Corps was established under the Defense Act of June 3rd, 1916, the required two years' work being included in its four year course. Instruction is given in Infantry, Field Artillery, and Veterinary. Under ordinary circumstances this work is under eight commissioned officers, three warrant officers, and eleven non-commissioned officers of the Regular Army, detailed for the purpose.

The total credit in this department allowed towards the degree of Bachelor of Science in Education is eight semester hours, exclusive of Infantry 101-102 and 103-104 or Field Artillery 105-106 and 107-108, which are required of all male students in the Freshman and Sophomore classes.

EITHER 101-102 OR 105-106 ARE REQUIRED OF ALL FRESHMEN

101-102. Infantry. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. An elementary course including infantry drill, close and extended order, battle formations, formations for protection in hostile countries, etc., practice with gallery rifles at any open hour, daily during the winter months. Lecture one hour each week by the President.

105-106. Field Artillery. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. Field artillery drill, administration, ordnance, and materiel. Lecture one hour each week by the President.

EITHER 103-104 OR 107-108 ARE REQUIRED OF ALL SOPHOMORES

103-104. Infantry. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. A continuation of 101-102, with additional instruction in pistol practice, the bayonet, and hand grenades.

107-108. Field Artillery. One credit hour. The year. Three hours each week. One-half theoretical and one-half practical work. Artillery, motors, topography, and reconnaissance.

125-126. Advanced Military Science. For Infantry. Two credit hours. The year. Prerequisites, 101-102, 103-104, or equivalent. Five hours each week. Two hours are allotted to training as instructors in Courses 101-102 or 103-104. Classroom work three hours each week in advanced minor tactics, map problems, liaison, topography, field engineering, military law, technique of automatic rifles, machine guns, and infantry cannon.

135-136. Advanced Military Science. For Field Artillery. Two credit hours. The year. Prerequisites, 105-106, 107-108, or equivalent. Five hours each week. Classroom work three hours each week in field artillery, communication, gunnery, conduct of fire, tactics, care and training of horses. Practical work in horsemanship and training as instructors, two hours each week.

127-128. Advanced Military Science. For Infantry. Two credit hours. The year. Prerequisite, 125-126 or equivalent. Five hours each week. Two hours allotted to training as instructors in Courses 101-102 or 103-104. Classroom work three hours each week in topography, military policy of the United States, and advanced work in subjects under 125-126.

137-138. Advanced Military Science. For Field Artillery. Two credit hours. The year. Prerequisite, 135-136 or equivalent. Five hours each week. Classroom work three hours each week in minor tactics and map maneuvers, military policy of the United States, military history, military law, care and training of horses. Practical work in horsemanship and practice as instructors, two hours each week.

SUMMER CAMPS

As a part of the instruction of the Reserve Officers' Training Corps at the University, summer camps are conducted for this district: Infantry and Field Artillery, at Camp Knox, Kentucky, thirty-one miles from Louisville. One summer camp for the students of the first two years is held between the first and second school years. This camp is voluntary. The camp for the advanced course is held between the third and fourth years and is required. For special reasons the advanced course camp may be postponed until after the fourth year is completed.

These camps are of six weeks duration and the work is mostly practical. In addition to military work, field sports and competitions are conducted. The training for Infantry includes firing on the target range with service rifles and using ball ammunition in combat. The training for Field Artillery includes firing field guns with service ammunition. The development of leadership and discipline are primary subjects of these camps.

The Government furnishes transportation to and from the camps. While in camp, clothing, subsistence, medical attention, and entertainment are provided.

PHILOSOPHY

Office, 321 University Hall

PROFESSOR LEIGHTON, ASSISTANT PROFESSORS CHANDLER, AVEY,
AND WILLIAMS

The courses in Philosophy are not open to Freshmen. They fall into two groups: the first, having no prerequisites, comprises 101-102, 101-104, 105-106, 107-108, 115-116, 138-139; the second comprises the remaining courses, which are of more advanced character and have special prerequisites. All students concentrating in Philosophy should take 121-122.

The following courses are of special interest to students in the fields indicated: 121-122 is included in all as being fundamental to all human interests; for students of literature and fine arts, 101-102, 104, 107-108, 115-116, 138, 139, 145-146, 121-122; for students of mathematics and non-biological science, 101-102, 104, 107-108, 113, 114, 117, 118, 121-122; for students of psychology, biological, and social science, 101-102, 104, 105-106, 111-112, 117, 118, 150, 145-146, 121-122; for students of education, 101-102, 104, 105-106, 107-108, 145-146.

101. Introduction to Philosophy. Three credit hours. Either semester. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams.

The meaning and scope of philosophy, its typical problems, its relation to the special sciences, morality, art, the state, and religion.

104. Principles of Philosophy. Three credit hours. Second semester. Prerequisite, Philosophy 101, or 107, or 108, or 105. A continuation of Philosophy 101. Mr. Leighton, Mr. Chandler, Mr. Avey, Mr. Williams.

A discussion of the following topics: Theory of Knowledge and Reality, The Nature and Place of Value, The Meaning of Personality, and The Meaning of Progress.

102. Introductory Logic. Three credit hours. Either semester. Mr. Chandler, Mr. Avey, Mr. Williams.

A practice course in the methods of correct thinking.

105. Elementary Ethics. Three credit hours. First semester. Mr. Chandler, Mr. Williams.

An introductory study of the chief theories of the moral life.

106. Elementary Ethics: Social Ethics. Three credit hours. Second semester. Mr. Leighton, Mr. Chandler, Mr. Williams.

A discussion of the ethics of the social order with especial reference to industrial and economic activities, the family, the state, education, and the international order.

107. History of Ancient Philosophy. Three credit hours. First semester. No prerequisite. Mr. Avey.

Ancient oriental ideas are briefly touched upon; most of the semester is devoted to the study of Greek philosophy; Christian ideas before 300 A. D. are also included. The aim is to gather up the most important contributions to human thought from the dawn of history through Neo-Platonism.

108. History of Medieval and Modern Philosophy. Three credit hours. Second semester. No prerequisite. Mr. Avey.

The chief problems of medieval thought are considered; the evolution of modern thought in its larger movements is followed to the present time.

115-116. Esthetics. Two credit hours. The year. Mr. Chandler.

A study of the various fine arts (including music and literature) and of the beauty of nature, with the aim of discovering their relation to human nature, their respective limitations, and their value for individual and social life.

157. The Formation of the Old Testament. Two credit hours. First semester. No prerequisite. Mr. Avey.

The American Standard Version is traced to its sources; the formation of the canon is considered; the structure of the text is critically analyzed for the purpose of developing a view of its history.

158. The Development of Hebrew Ideas. Two credit hours. Second semester. No prerequisite. Mr. Avey.

A study of the development of Hebrew thought, and of the types of literature in which it is expressed.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

***113. Advanced Logic.** Two credit hours. First semester. Prerequisites, Philosophy 102 and 101 or 108. Mr. Avey.

A study of the chief recent developments in logic, with some attention to application in practice.

***114. Epistemology.** Two credit hours. Second semester. Prerequisites, Philosophy 101-102, 101-104, or 107-108. Mr. Avey.

A critical and constructive study of the most important theories of knowledge.

119. Philosophy of Religion. Two credit hours. First semester. Prerequisite, one year's work in philosophy, psychology or history of religion. Mr. Leighton.

An account of the actual nature of religion, as shown in its chief historical and psychological phenomena, and an interpretation of its significance for culture and the truth of its leading conceptions.

120. Origins of Christian Thought. Two credit hours. Second semester. Prerequisite, Philosophy 101, 105, or 107. Mr. Leighton.

A brief survey of the problems of the composition, authorship, and date of the Gospels, Epistles, and Acts of the Apostles,

*Not given in 1921-1922.

followed by a critical inquiry into the content of the ethical, psychological, and metaphysical teaching of the New Testament, with especial reference to their Hebraic and Hellenic backgrounds.

121-122. Metaphysics. Three credit hours. The year. Prerequisites, Philosophy 101-104 or 107-108, and one year of psychology or a natural science. Mr. Leighton.

A systematic discussion of the fundamental problems of theoretical philosophy; the meaning of truth and its relations to reality, the philosophy of nature, and of the human self, the problems of freedom, evil, immortality, and theism.

123-124. Representative Ancient Philosophers. Three credit hours. The year. Prerequisite, one year of philosophy and one year of a related subject. Mr. Chandler.

Selected works of Plato and Aristotle with reference to their permanent significance for philosophy and politics.

***125-126. Representative Modern Philosophers.** Three credit hours. The year. Prerequisite, Philosophy 101-102 or 107-108. Mr. Chandler.

Selected works of Leibniz, Hume, Kant, and Hegel will be studied with reference to their permanent significance.

Philosophy 123-124 and 125-126 will be given in alternate years.

***141-142. The Main Currents in Contemporary Philosophy.** Two credit hours. The year. Prerequisite, one year of philosophy. Mr. Chandler.

A non-technical account and estimate of the chief formative influences in the reflective life of the present time. Intended for students of literature, science, and social movements.

***145-146. Philosophy of History.** Two credit hours. The year. Prerequisites, any two of Philosophy 101, 105, 106, 111, 134, 107, 108, and one year's work in European history. Mr. Leighton.

A critical examination of the principal theological and philosophical theories of the meaning of history and human progress in the light of ethics and the philosophy of values, with a view

*Not given in 1921-1922.

to arriving at correct conceptions of the meaning of history and the fact and nature of progress, especially ethical and intellectual progress. The theories dealt with will be chiefly those of the Church fathers, of the German philosophers from Lessing to Nietzsche, Dilthey, Windelband, Rickert, Simmel, and Eucken; and of Comte, Spencer, Buckle, Carlyle, and contemporary English and American thinkers. Intended for students of literature, history, politics, and sociology.

150. Pragmatism. Two credit hours. Second semester. Prerequisite, one year of philosophy or of biological science or of social science. Mr. Williams.

An account and critical estimate of the movement known as pragmatism and its later form, instrumentalism, with special reference to the work of William James, F. C. S. Schiller, and John Dewey.

FOR GRADUATES

201-202. Seminary in Philosophy.

207-208. Contemporary Philosophical Issues.

209-210. Discussion of Current Philosophical Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSICAL EDUCATION

MEN

Office, The Gymnasium

PROFESSORS ST. JOHN, WILCE, CASTLEMAN, AND NICHOLS, ASSISTANT PROFESSOR TRAUTMAN, MR. COBB, MR. HINDMAN

Students in the College of Education may take courses in Physical Education as a minor—twelve semester hours, in addition to the required courses, 100, 101-102 (men) or 100, 131-132, 133-134 (women)—on the approval, in each case, of the Head of the Department of Physical Education and the Dean of the College.

Juniors and Seniors not taking Physical Education as a minor, may elect one or more courses in addition to the courses required of all students. Such students may not elect in the aggregate more than six semester hours. In each case the approval of the Head of the Department and the Dean of the College of Education is necessary.

100-100. Hygiene. One credit hour. Either semester. Required of every Freshman during his first year of residence in the University.

This course deals with the various factors and conditions which affect the health and efficiency of the student.

101-102. Physical Education. One credit hour. The year. Two hours each week. Required of every Freshman in this College during his first year of residence in the University.

The work in this course is based on a thorough physical examination given at the beginning of the year. The course includes body-building exercises for the relief and correction of slight bodily defects and faulty posture and gymnastic, athletic games, and contests aiming to promote and foster vigorous health and to give a fundamental training which will develop motor skill, endurance, strength, self-control, and self-confidence.

107. Organization and Administration of Physical Education in Secondary Schools. Two credit hours. First semester. Elective. Mr. St. John, Mr. Wilce, Mr. Castleman.

Consideration of problems of organization for general intramural physical activity. Organization, administration, and control of competitive athletics.

110. Theory of Physical Education. Two credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Wilce.

A consideration of the history and principles of physical education and the relation of physical education to the general educational system.

111. Principles of Coaching Track and Field Sports. One credit hour. First semester. Mr. Castleman.

Instruction and practical demonstration in the usual track and field events. A study of the rules and scoring methods. The management of meets. Problems of training. Adaptation of track and field events to large group contests.

112. Principles of Coaching Football. One credit hour. Second semester. Mr. Wilce.

A consideration of football rules, football fundamentals, individual and team play, offensive and defensive formations, pedagogy and methods of coaching. Laboratory will consist of field work and observation under direction.

113. Principles of Coaching Baseball and Basketball. One credit hour. First semester. Mr. St. John.

A study of batting, base running, playing all positions, methods of coaching. A course in fundamentals. Basketball: a study of individual and team play, offensive and defensive, practice methods. A knowledge of the rules of baseball and basketball is a prerequisite.

120. Anthropometry and Physical Diagnosis. Two credit hours. Second semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

Theory of taking and keeping records of physical history of students. Anthropometric measurements. Preliminary examination of eye, ear, nose, throat, lungs, heart, back, feet, with interpretation of knowledge obtained.

122. Teaching of Physical Education. Two credit hours. Second semester. Elective. Prerequisites, Physiology 101-102, Psychology 101-102, and previous satisfactory physical training. Mr. Nichols, Mr. Cobb, Mr. Hindman.

One hour theory of teaching and two hours practice of gymnastics, calisthenics, and general floor work and handling of squads.

125. Hygiene and First Aid. Two credit hours. First semester. Elective. Prerequisite, Physiology 101-102. Mr. Nichols.

A study of the basic principles of health and their application in personal hygiene with particular reference to physical education. Principles and methods of first aid, emphasizing conditions arising in connection with physical education.

NOTE: The above courses are open to third and fourth year students on the approval of the Head of the Department of Physical Education and the Dean of the College of Education.

WOMEN

ASSISTANT PROFESSOR SCOFIELD, MISS RAYNOR-RANCK,
MISS GIBLING

100-100. Hygiene. One credit hour. Either semester. Required of all women students during the first year of attendance at the University.

This course deals with the various factors and conditions which affect the health and efficiency of the student.

131-132. Physical Education. One credit hour. The year. Two hours each week. Required of all women students during the first year of attendance at the University.

One hour floor work including marching tactics, free-hand exercises, light apparatus, folk dancing and games.

One hour outdoor sports. Choice of the following:

Fall—Hockey, tennis, archery, playground games.

Winter—Basketball, hiking, games.

Spring—Baseball, track, tennis, archery.

Natural interpretative dancing may be substituted for the required hour of sport or taken in addition.

133-134. Physical Education. One credit hour. The year. Three hours each week for second year students. Required of all women students.

Continuation of Physical Education 131-132 with a required hour of swimming until the test is passed, after which a choice of outdoor sport or dancing is given.

135. Anthropometry and Physical Diagnosis. Three credit hours. First semester. Two lectures and three hours of practice each week. Prerequisite, Physiology 101-102.

136. Theory and Practice of Teaching Physical Education. Three credit hours. Second semester. Two lectures and three hours of practice each week. Prerequisite, Physiology 101-102.

Relation of physical education to education. Instruction in planning and conducting lessons; practice teaching.

NOTE: The above courses are open only to Juniors and Seniors on approval of the Department of Physical Education for Women and the Dean of the College of Education. While it is not at present demanded, it is desirable that those electing Courses 135 and 136 should have had courses in anatomy, physiology, psychology, and history of education.

Physical Education 125 for men is also open to women who desire to minor in Physical Education.

PHYSICS

Office, 107 Physics Building

PROFESSORS COLE, EARHART, BLAKE, AND ALPHEUS W. SMITH,
ASSISTANT PROFESSOR HEIL, MR. WOODBURY, MR. ALVA W.
SMITH, MR. WARD, MR. JARVIS, MR. LOWRY, MR.
BROWN, AND DEPARTMENT ASSISTANTS

103-104. General Physics. Four credit hours. The year. Recitations, lectures, and laboratory. A non-mathematical course for students who have no entrance credit in physics.

105-106. General Physics. Four credit hours. The year. Three recitations and one three-hour laboratory period each week. Prerequisite, entrance credit in physics. Mr. Earhart, Mr. Blake.

120. The Teaching of Physics. Two credit hours. Second semester. Prerequisite, one semester of college work in physics. Mr. Cole.

121-122. Laboratory. Three to five credit hours. The year. Prerequisite, Physics 103-104 or 105-106. Mr. Heil.

151-152. Advanced General Physics. Three credit hours. The year. Three recitations each week. Prerequisites, Physics 103-104 or 105-106 and Mathematics 121-122 or 131-132.

This course is a continuation and extension of the general course in college physics. Duncan and Starling's "Textbook of Physics" will probably be used as a text.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

123-124. Advanced Laboratory. Three to five credit hours. The year. Prerequisite, Physics 121-122. Mr. Heil.

143-144. Advanced Light and Electricity. Three credit hours. The year. Prerequisites, Physics 103-104 or 105-106 and Mathematics 141-142 or 127-128. First semester, light, Mr. Cole; second semester, electricity and magnetism, Mr. Earhart.

This course alternates with Physics 147-148.

Physics 143-144 and 147-148 together constitute a two-year cycle, moderately advanced, covering the whole subject of physics.

145-146. **Proseminary in Physics.** One credit hour. The year. Prerequisite, two years of college work in physics or one year of physics and one of mathematics or chemistry. Mr. Cole.

*147. **Molecular Physics and Heat.** Three credit hours. First semester. Prerequisites, Physics 103-104 or 105-106 and Mathematics 141-142 or 127-128. Mr. Earhart.

This course alternates with Physics 143-144.

*148. **Conduction of Electricity Through Gases and Radioactivity.** Three credit hours. Second semester. Prerequisites, Physics 103-104 or 105-106 and Mathematics 141-142 or 127-128. Mr. Heil.

This course alternates with Physics 143-144.

*169-170. **Theory of Light.** Two credit hours. The year. Prerequisites, Physics 105-106 and Mathematics 141-142, or equivalent. Mr. Cole.

An advanced course in light.

FOR GRADUATES

201-202. **Research Laboratory.**

203-204. **Theoretical Mechanics.**

205-206. **Thermodynamics and Electrolytic Conduction.**

*207-208. **Theory of Electricity and Magnetism.**

*211-212. **Theory of Oscillations with Applications to Wireless Telegraphy.**

213-214. **Conduction of Electricity Through Gases and Radioactivity.**

217-218. **Electronic Theory and Atomic Structure.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

Office, 104 Biological Building

PROFESSOR BLEILE, ASSISTANT PROFESSORS SEYMOUR, McPEEK,
AND SMITH, MR. DURRANT, AND DEPARTMENT ASSISTANTS

Physiology 101-102 is the foundation course offered by the department and is prerequisite to advanced work. For Arts and Arts-Education students,

*Not given in 1921-1922.

or others who expect to teach in biological subjects, the following sequence of courses would seem desirable:

Course 101-102 (accompanied by 137-138) followed by 115 and 118 or 106, and these courses succeeded by 109-110 or 111-112. Advanced laboratory courses should be preceded or accompanied by advanced physics and chemistry courses. A foundation knowledge of comparative anatomy or of embryology will also prove helpful in advanced physiology.

Course 119-120 has been arranged to present fundamental principles of physiology in a non-chemical manner to students who have had no training in chemistry, but this course is not acceptable as a prerequisite for advanced work.

101-102. Physiology. Three credit hours. The year. Not open to Freshmen. Must be preceded by a course in chemistry. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A foundation course in the fundamental principles of animal physiology with applications to the human body, including demonstrations in circulation, digestion, respiration, gross and minute anatomy, reflex actions, and other simple phenomena of living organisms.

137-138. Physiology Laboratory. One credit hour. The year. One laboratory period of two hours each week. Must be accompanied by Physiology 101-102, which course it is intended to supplement by experimental work. Mr. Durrant.

106. Chemical Physiology. Four credit hours. Second semester. Prerequisite, a course in elementary physiology. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course including lectures and recitations on the physiology of the body fluids, foods, digestion, absorption, excretion, and metabolism.

119-120. General Physiology. Three credit hours. The year. Not open to Freshmen. Mr. Bleile.

A course similar to 101-102 open to students who have no credit in chemistry. (Students who have had chemistry will elect Physiology 101-102.) A course presenting the principles of physiology in a non-chemical manner.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

109-110. Physiological Laboratory. Three credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

A laboratory course with conferences, recitations, and assigned readings. The content of the course varies from year to

year, being primarily intended to familiarize the student with the technique of laboratory experimentation in the physiology of muscle, nerve, respiration, circulation, and secretion.

111-112. **Physiological Laboratory.** Five credit hours. The year. Mr. Bleile, Mr. Seymour, Mr. Durrant.

Similar to 109-110 except carrying more credit hours and including a correspondingly greater number and variety of laboratory experiments.

115. **Advanced Physiology.** Three credit hours. First semester. Prerequisite, Physiology 101-102. Mr. Bleile.

Lectures, recitations, and demonstrations on the physiology of circulation, digestion, and respiration. May be profitably taken in conjunction with Physiology 109-110.

118. **Advanced Physiology.** Three credit hours. Second semester. Prerequisite, Physiology 101-102. Mr. Durrant.

Lectures, recitations, and demonstrations on the physiology of the nervous system, including its development, structural relations, and functioning. A study of the neuron, reflex paths, reflex actions, and their modification, and of the special and general sensations.

FOR GRADUATES

201-202. **Advanced Physiology.**

203-204. **Research Work.**

For description of graduate courses in this department see the Bulletin of the Graduate School.

POLITICAL ECONOMY

(See Economics and Sociology)

POLITICAL SCIENCE

Office, 206 Hayes Hall

PROFESSORS SPENCER AND COKER

101-102. **Government in the United States and Europe.** Three credit hours. The year.

A general survey of governmental institutions, national, state, and local, in the United States and the leading countries

of Europe. This course is not open to Freshmen. It must be preceded by a year's work in college history and must precede all other courses in this department.

***109-110. State, County, and Municipal Government in Ohio.** Two credit hours. The year. Prerequisite, Political Science 101-102.

This study covers the historical evolution and actual working of the state's governmental machinery and the particular functions which it performs. The course provides a groundwork for those preparing to teach civics or engage in public service, journalism, or civic secretarial work.

PRINCIPLES AND PRACTICE OF EDUCATION

Office, 100B Hayes Hall

PROFESSORS CLIFTON AND TWISS, ASSISTANT
PROFESSOR LANDSITTEL

103. Principles and Methods of High School Teaching. Three credit hours. Either semester. Prerequisites, Psychology 101-102, History of Education 101.

Methods of teaching in high school with special attention given to modern schoolroom practices.

104. Observation, Criticism, and Practice. Three credit hours. Either semester. Prerequisite, Principles and Practice of Education 103.

A study of the general and special method; observation and criticism of classroom work in high school. Practice in teaching, ten weeks.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

111-112. Advanced Principles of Education. Three credit hours. The year. Prerequisites, Physiology 101 and 104, Psychology 101-102, and History of Education 101-102.

This course is a search in the fields of biology, psychology, and history of education for fundamental principles that should guide in educational practice, and is open to teachers and graduate students.

*Not given in 1921-1922.

109. Principles of Education. Three credit hours. Either semester. Open to Seniors and graduate students only. Mr. Clifton.

A review of educational theory and practice underlying teaching.

113. Social Aims in Education. Two credit hours. First semester. Prerequisites, Psychology 101-102 and either Sociology 101-102 or Philosophy 101-104, or 105, or 107-108, or European History 135-136. Students are advised to take Psychology 125. Mr. Leighton.

A systematic consideration of the social and personal aims and principles of the educational process in the light of psychology, ethics, philosophy, and the national and international situations, with especial reference to the function of the school in organized society.

119. The Supervision of Teaching. Three credit hours. Either semester. Open to Seniors and graduate students. Mr. Clifton.

A study of modern methods and problems of classroom supervision; directions for checking results; study of most approved practices in classroom supervision.

PSYCHOLOGY

Office, 403 University Hall

PROFESSORS ARPS, PINTNER, AND WEISS, ASSISTANT PROFESSORS BRIDGES, CRANE, AND BURTT, MISS COY, MISS ROGERS, MISS HATCH, MISS CHASELL, MR. ESPER, AND DEPARTMENT ASSISTANTS

101-102. Elementary Psychology. Introductory course. Three credit hours. The year. All instructors.

Special sections are provided for students in Arts-Education and Education. See Time Schedule.

Psychology 101 is given also during the second semester.

Psychology 102 is given also during the first semester.

A limited number of beginning students in psychology may take 103-104 as equivalent to 101-102.

103-104. Elementary Psychology. Three credit hours. The year. Two lectures and one laboratory period each week. Mr. Weiss.

This course meets the same requirements as a prerequisite as Psychology 101-102. Designed for students who wish to perform some of the simpler psychological experiments in their elementary course.

The number of students admitted to this course is limited to forty.

107-108. Educational Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner, Miss Coy, Miss Hatch, Miss Chassell.

Psychology 107 is given also during the second semester.

Psychology 108 is given also during the first semester.

111. Experimental Psychology: Introduction. Three credit hours. First semester. One lecture and two laboratory periods each week. Prerequisite, Psychology 101-102. Mr. Weiss.

A systematic training course in the psychological methods as applied to the sense fields. Topics: vision, audition, the cutaneous, olfactory, gustatory, kinesthetic, and organic senses.

112. Experimental Psychology: Advanced. Three credit hours. Second semester. One lecture and four laboratory hours each week. Prerequisite, Psychology 104 or 111. Mr. Weiss.

A systematic training course in the psychological methods as applied to the more complex processes. Topics: perception, memory, attention, illusions, association, and reaction time.

149-150. Physiological Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Mr. Crane.

This course is adapted to meet the needs of Medical students and those taking courses in abnormal psychology and the defective child. A more detailed consideration is given the nervous mechanism and the correlation of the nervous mechanism with mental phenomena. Topics: nervous elements and their functions; end organs and their functions; cerebral functions; correlation of sensation, perception, feeling, emotion, memory, with the nervous mechanism.

127. Industrial Psychology. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Lectures, recitations, reports. Mr. Burt.

The application of psychology to the following problems: vocational guidance, selection of industrial workers, industrial learning and training, the adaptation of technical to mental conditions, industrial monotony, fatigue, rest, and the length of the working day.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

114. Mental and Social Measurements. Two credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Not open to Freshmen and Sophomores. Mr. Burt.

A course designed to meet the needs of those students who expect to carry on investigations in psychology, education, and the social sciences. Topics: standard methods of handling data; computation of averages, deviations and correlations; graphical representation; grading and marking systems.

115-116. Genetic Psychology and Child Study. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to Freshmen and Sophomores. Miss Chassell.

This course is designed to present the facts concerning the mind of the child and its development, and their significance from the standpoint of the home, the school, and society. It will provide opportunity for the observation of children, and for the examination and evaluation of theories relative to child psychology.

***118. Principles of Human Behavior.** Two credit hours. First semester. This course alternates biennially with Psychology 153. Prerequisite, twelve hours of psychology. Mr. Weiss.

A study of the development of theories of human behavior and a consideration of the simplest assumptions necessary and sufficient to explain the facts of human behavior as dependent on social and biological conditions.

119. Animal Psychology. Two credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Burt.

*Not given in 1921-1922.

A survey of animal mind and behavior from one-celled organisms to the anthropoid apes. The topics studied will include sensations, instinct, learning, and intelligence, with especial reference to methods as well as results.

121. Abnormal Psychology. Four credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Bridges.

The abnormal mental phenomena, viz., disorders of perception, association, memory, affection, judgment, action, volition, and personality, with especial emphasis on their relation to the respective normal phenomena. The grouping of these disorders into the syndromes exhibited in the main types of insanity. Lectures, recitations, and clinics.

122. The Defective Child. Four credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Pintner.

The varieties and grades of mental deficiency, including the backward child of the schools and the distinctly feeble-minded. The causes of the same. Lectures, recitations, and clinics.

124. Psychopathology. Two credit hours. Second semester. Prerequisite, Psychology 121. Mr. Bridges.

The so-called borderland phenomena, sleep and dreams, psychopathology and everyday life, hypnosis and the hypnotic state, hysteria, psychasthenia, neurasthenia, and the constitutional psychopathic states. Considerable attention will be given to the various interpretations of these phenomena. Lectures, recitations, and reports.

125. Social Psychology. Three credit hours. First semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Arps.

The nature and variety of innate tendencies; the relation of these tendencies to acquired behavior and social control; the development of personality.

126. Folk Psychology. Three credit hours. Second semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Esper.

The psychic factors involved in various group activities which apply to the problems of education, religion, and social aims.

128. Psychology of Advertising. Two credit hours. Either semester. Prerequisite, Psychology 101-102 or 103-104. Mr. Crane.

A psychological study of the mediums employed in effective advertising. The types of appeal; the nature and laws of effective appeal. The relation of instincts, memory, feelings, and emotions to effective advertising. Lectures, reports, and investigation of practical problems in the laboratory.

131-132. Advertising Laboratory. Two credit hours. The year. Prerequisites, Psychology 101-102 or 103-104, and 128 either taken previously or concurrently. Mr. Crane.

General and special problems illustrating the application of laboratory methods, and the treatment and use of experimental data in the field of advertising.

135-136. Industrial and Vocational Psychology Laboratory. Two credit hours. The year. Prerequisite, permission of the instructor. Mr. Burt.

Practical work in the application of psychology to industrial and vocational problems, with especial emphasis on the development of mental tests for hiring employees. Much of the work will be done in local business and industrial plants. The class will participate in analyzing specific types of industrial operation, devising and selecting mental tests for such operation, obtaining vocational and production ratings, correlating them with test scores, applying the technique of partial correlation and following up new employees hired on the basis of the tests.

129. Advanced Psychology. Two credit hours. First semester. Prerequisite, ten hours of psychology. Miss Rogers.

The purpose of this course is to give a larger background to the advanced student of psychology, with respect to the development of psychology as a science, emphasizing the relations of psychology to other disciplines, especially the sciences, and with respect to the evolution of some of its fundamental concepts as consciousness and behaviorism.

133-134. Mental Tests. Three credit hours. The year. Prerequisite, Psychology 112 or 107-108 or 121-122. Mr. Pintner.

Practical laboratory work in the application of all kinds of psychological tests and educational scales. Adapted to meet

the individual needs of all prospective teachers or those desiring practice in applying the Binet scale and other scales for mental classification.

138. Psychology of Feeling and Emotion. Two credit hours. Second semester. Prerequisite, Psychology 129. Miss Rogers.

A study of the various theories of feeling and emotion and the fundamental relations of emotion to instincts. The relations between these subjects and social behaviors will be emphasized.

***139-140. History of Psychology.** Two credit hours. The year. Given biennially. Prerequisites, Psychology 129 and 138 or the permission of the instructor. Mr. Burt.

The course aims to view modern psychological problems in the light of their historical antecedents. The development of various theories such as those of sensation, attention, space perception, and emotion will be traced from earliest times to the present. As far as possible assignments will involve reference to original sources.

141-142. Minor Problems. Two to four credit hours. The year. Prerequisite, at least twelve hours of psychology.

Investigation of minor problems in the various fields of psychology.

147-148. The Psychological Clinic. One or two credit hours. The year. Permission of the instructor is necessary. Mr. Pintner.

Practical work in the diagnosis of defective and exceptional children.

151-152. Criminal and Legal Psychology. Two credit hours. The year. Prerequisite, Psychology 101-102 or 103-104. Not open to Freshmen and Sophomores. Mr. Crane.

A critical presentation of the evolution of the present-day psychological conception of crime, with a study of the neurological basis of, and the nature of the stimuli to, anti-social behavior. There will be both a critical and experimental study of the psychological principles applied to the problems of testimony, those underlying recently advocated reforms in legal

*Not given in 1921-1922.

procedure, and the technique and reliability of suggested psychological methods for the detection of criminals.

153. Theoretical Psychology. Two credit hours. First semester. Alternating biennially with Psychology 118. Prerequisite, at least two years of psychology. Mr. Weiss.

Lectures and assigned readings from Poincaré, Pearson, Mach, Avenarius. The evolution of modern psychology as influenced by the development of the natural sciences with special emphasis on the nature of psychological problems, experiments, and laws.

***155. The Treatment of Exceptional Children.** Two credit hours. First semester. Prerequisites, Psychology 101-102 or 103-104 and permission of the instructor. Not open to Freshmen and Sophomores. To be given biennially.

The aim of the course is to give an understanding of the special classes of children, and training for prospective teachers of exceptional children, both superior and inferior types. Topics: sensory defects, speech defects, nervous irritability, the psychopathic, special intellectual defects, moral eccentricities. Lectures, reports, and practical work with children in the public schools.

FOR GRADUATES

201-202. Major Research.

203-204. Seminary in Psychology.

205-206. Contemporary Psychological Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

PUBLIC HEALTH AND SANITATION

Office, 710 North Park Street

PROFESSORS HAYHURST AND McCAMPBELL, ASSISTANT
PROFESSOR SELBERT

101. Public Health Administration. Two credit hours. First semester. Two lectures or recitations each week. Mr. McCampbell.

*Not given in 1921-1922.

The organization of national, state, and local health departments, sanitary law and legal powers, and responsibilities of health officers and boards of health.

105-106. Principles of Public Health Nursing. Two credit hours. The year. Two lectures or recitations each week. Mrs. Selbert.

This course takes up the historical development of nursing, the organization of the professional field, and the place of nursing in its relation to the various forms of medico-social and public service. It discusses the best methods of administration as to the supervision and arrangement of practical work, classification and preservation of records, and the presentation and publication of reports. This course is intended also to give a general grasp of measures to be followed outside of hospital nursing in various types of sickness, to relieve immediate needs and to teach hygiene and methods to prevent the spread of disease. Special branches of Public Health work will be considered and the practical handling of individual problems will be discussed. Observation will be provided in agencies especially fitted to meet these problems.

113. Personal Hygiene. Two credit hours. First semester. Two lectures or recitations each week. Mr. Hayhurst.

Component systems of the human body are considered from the point of view of their functions, toleration and adaptation limits, habit effects, normal and abnormal states with signs and indications thereof, common diseases with their prophylaxis and the principles of emergency treatments.

This course aims, in a non-technical manner, to point out the principles for maintaining personal health and efficiency.

121. Public Health Problems. Two credit hours. Either semester. Two lectures or recitations each week. Mr. Hayhurst.

This course includes an elementary consideration of the various public health problems which present themselves. Consideration is given the question of the prevention of unnecessary infant mortality, the physical supervision of school children, the provision and the protection of the public water and food supplies, the proper elimination of wastes, the sociological aspects of Public Health work, including especially the question of the elimination of tuberculosis. Limited instruction is given on the

matter of quarantine regulation, disinfection, and in the control of communicable diseases.

SCIENCE NURSING

151. Observation and Criticism of the Teaching in Schools of Nursing. Two credit hours. Either semester.

This course considers the aims and standards of the teaching and the scientific principles involved in the nursing care of the patient.

153. Teaching of Nursing Principles and Methods. Two credit hours. Either semester.

The selection and arrangement of subject-matter, planning lessons and demonstrations, equipment for classroom, and other teaching helps will be offered.

156. Teaching Practice in Schools of Nursing. Two credit hours. Either semester.

Opportunity is afforded to carry out lesson plans. Discussions on selection and arrangement of subjects in the curriculum and use of textbook and other teaching material.

158. Observations of Supervision in Hospitals and Training Schools. Two credit hours. Second semester.

Discussion of problems encountered in furnishing and maintaining a hospital and school for nurses. General organization of the various departments in modern hospitals and their relation to nursing education.

159. History and Ethics of Nursing. One credit hour. First semester.

Definition; professional ethics; hospital etiquette; school uniform; the social life of the student; required reading; and a brief history of nursing.

162. History of Nursing and Contemporary Problems. Two credit hours. Second semester.

Intended to give a general grasp of problems encountered in nursing from the earliest times to the present day. Organization of the professional field; educational and social developments; association; and state regulations.

RHETORIC AND ENGLISH LANGUAGE

(See English)

ROMANCE LANGUAGES AND LITERATURES

Office, 104 Hayes Hall

PROFESSORS HENDRIX AND MOORE, ASSISTANT PROFESSOR ROCKWOOD (ACTING HEAD), ASSISTANT PROFESSORS HAMILTON, HACKER, GUTIERREZ, WILLIAMS, HAVENS, AND CONRAD, MR. TAILLIART, MISS HIER, MR. SLOAN, MISS BROWN, MISS SCHONS, MRS. ARTHUR, MISS BIGGER, MR. FOURE, MR. GRAHAM, MR. GRISMER, MISS TERRY, AND DEPARTMENT ASSISTANTS

French 101-102, 103-104 must precede all other courses in French.

The undergraduate courses offered in French and Spanish, beginning with third-year collegiate work, fall into two general groups:

(1) Literary—French 109-110, 125-126, 135-136, 137-138, 139-140, 141-142, 145-146.

Spanish 105-106, 119-120, 121-122, 123-124, 125-126, 131-132.

(2) Linguistic—French 123-124, 127-128, 129-130, 131-132.

Spanish 109-110, 113-114.

So that students may emphasize one or both of these lines of study.

For students who enter with two years of high school French, the following outline course is recommended:

First year: French 103-104.

Second year: (1) French 109-110 or 135-136.

(2) French 127-128.

Third and Fourth years: (1) French 137-138, 139-140, 141-142.

(2) French 125-126, 129-130, 131-132, 122, 123, or 124.

For students who enter with two years of high school Spanish, the following outline course is recommended:

First year: Spanish 103-104.

Second year: Spanish 105-106 and 109-110.

Third and Fourth years: Spanish 113-114, 119-120, 121-122, 123-124, 125-126, 131-132, 115-116.

To receive a departmental recommendation as a teacher of French, the student must have taken French 101-102, 103-104, 109-110, or 135-136, at least one other advanced course, and the course for teachers, French 122.

To receive a departmental recommendation as a teacher of Spanish, the student must have taken Spanish 101-102, 103-104, 105-106, or their equivalent; and in addition an advanced course and the course for teachers, Spanish 115-116.

FRENCH

101-102. Elementary French. Four credit hours. The year. Grammar and prose. All instructors.

No student is allowed to take this course simultaneously with Spanish 101-102 or Italian 101-102.

103-104. Intermediate French. Four credit hours. The year. Prerequisite, French 101-102 or an equivalent. All instructors.

French 104 is given also during the first semester.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major in French are urged to elect the following courses outside of the department: History of Critical Theory (English 205), History of France (European History 121-122), Introduction to the Study of the History of Language (Greek 141), and the History of Philosophy (Philosophy 107-108).

109-110. French Literature of the 17th Century. Three credit hours. The year. Prerequisite, French 104. Mr. Rockwood.

The principal literary movements of the age; formation of the school of 1660. The Libertines, growth of French comedy and tragedy, and the quarrel of the Ancients and the Moderns will be discussed. Representative plays of Molière, Corneille, and Racine will be studied. Selected works of Malherbe, De Viau, Descartes, Pascal, La Bruyère, La Fontaine, La Rochefoucauld, and Boileau will be read. Lectures, collateral reading, and reports.

135-136. French Literature of the 19th Century. Three credit hours. The year. Prerequisite, French 104. Mr. Moore.

The Romantic and Realistic Movements. Chateaubriand, Hugo, Merimee, Flaubert, Rostand, and others.

137-138. French Literature of the 18th Century. Two credit hours. The year. Prerequisite, French 109-110 or French 135-136. Given biennially, alternating with French 139-140. Mr. Havens.

Rapid reading, with lectures and reports. Special study of Crébillon, Voltaire, Marivaux, La Chaussée, Diderot, Beaumarchais, Montesquieu, Rousseau, and others.

***139-140. French Literature of the 15th and 16th Centuries.** Two credit hours. The year. Alternates with French 137-138. Prerequisite, French 109-110 or French 135-136. Mr. Moore.

Villon, Rabelais, and Montaigne.

141-142. The French Novel. Two credit hours. The year. Prerequisite, French 109-110 or French 135-136. **Given biennially**, alternating with French 145-146. Mr. Williams.

First semester: Evolution of the Novel; the Novel in the 16th, 17th, and 18th Centuries; Rabelais, Honoré d'Urfé, Mme. de La Fayette, Lesage, Marivaux, l'Abbé Prevost, Rousseau, Voltaire, Diderot, Bernardin de St Pierre. Lectures, reports, and collateral reading.

Second semester: The Novel of the 19th Century; Mme. de Stael, Chateaubriand, George Sand, Hugo, Balzac, Flaubert, Maupassant, Zola, Daudet, France, Bazin, Loti, etc. Lectures, reports, and collateral reading.

***145-146. The Comedy of Manners in the 19th Century.** Two credit hours. The year. Prerequisite, French 109-110 or French 135-136. Given biennially, alternating with French 141-142. Mr. Rockwood.

Special study of Dumas fils, Augier, Scribe, Sardou, Becque, Cure, Hervieu, Lavedan, Donnay, and Bernstein. Rapid reading with lectures and reports.

122. The Teaching of French. Two credit hours. Second semester. Prerequisite, three years of collegiate French or an equivalent. Mr. Hacker.

Special problems and difficulties in the teaching of French. Teacher's equipment. Classroom aids. Lectures, discussions, practice in conducting recitations. It is strongly recommended that this course be preceded by French 123 and 124.

This course is required of all students desiring the department recommendation as a teacher of French.

123. French Phonetics. Three credit hours. Either semester. Prerequisite, three years of collegiate French or the equivalent. The class is limited to twelve. Mr. Hacker.

*Not given in 1921-1922.

The formation of French sounds. Lectures, with exercises in the use of the symbols of the International Phonetic Association. A systematic study of the rules of French pronunciation. Careful drill in the reading of French. Designed for advanced students who expect to teach French.

124. Review of French Syntax. Two credit hours. First semester. Prerequisite, three years of collegiate French or the equivalent. Mr. Hacker.

A careful elucidation of French grammar, with composition to illustrate. Designed for advanced students who expect to teach French.

***125-126. History of French Literature.** Two credit hours. The year. This course is given biennially and alternates with French 131-132. Prerequisites, French 127-128 and at least one course in Group I. This course is conducted in French. Mr. Fouré.

127-128. Elementary French Conversation and Composition. Two credit hours. The year. Prerequisite, French 104. This course is conducted in French. Mr. Fouré.

This course is limited to twenty students.

***129-130. Intermediate French Conversation and Composition.** Two credit hours. The year. Prerequisite, French 127-128. This course is conducted in French. Mr. Fouré.

This course is limited to twenty students.

131-132. Explication de Textes. Two credit hours. The year. Prerequisites, French 129-130 and a course in Group I. Given biennially, alternating with French 125-126. This course is conducted in French. Mr. Fouré.

Selections from nineteenth century and contemporary authors.

First semester: Lamartine, Hugo, Musset, Vigny, Sainte-Beuve, Michelet, Tocqueville, Taine, Leconte de Lisle.

Second semester: Maupassant, Daudet, Augier, Dumas, France, Barres, Bazin, de Curel, Rostand, Faguet, Lemaitre.

*Not given in 1921-1922.

ITALIAN

101-102. Elementary Italian. Four credit hours. The year. Grandgent's or Young's Grammar, and Bowen's Reader. Modern prose. Comedies of Goldoni. Mr. Williams.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

105-106. Modern Italian Literature. Two credit hours. The year. Prerequisite, Italian 101-102. Mr. Moore.

Manzoni, Pellico, Giacosa, Rovetta, Carducci, and others.

*107. Italian Literature of the Renaissance. Two credit hours. First semester. Alternates with Italian 119. Prerequisite, Italian 105-106. Mr. Moore.

Boiardo, Ariosto, Pulci, Machiavelli, Castiglione, Cellini, Tasso. Lectures, collateral reading, and reports.

*108. The Trecento. Two credit hours. Second semester. Alternates with Italian 120. Prerequisite, Italian 105-106. Mr. Moore.

Dante, Petrarch, Boccaccio.

119-120. Survey of Italian Literature. Three credit hours. The year. No prerequisites, and no knowledge of foreign language required. Alternates with Italian 107-108. Mr. Moore.

English translations of Dante, Petrarch, Boccaccio, Ariosto, Machiavelli, Cellini, Castiglione, Tasso, Manzoni, and others. Lectures, readings, and reports will be in English.

SPANISH

101-102. Elementary Spanish. Four credit hours. The year. All instructors.

The elements of Spanish grammar with abundant oral and written exercises. Elementary reading as a basis for oral and written practice.

No student may take this course simultaneously with French 101 or Italian 101.

103-104. Intermediate Spanish. Four credit hours. The year. Prerequisite, Spanish 101-102 or an equivalent. All instructors.

*Not given in 1921-1922.

A more comprehensive survey of the forms and syntax with more advanced reading as a basis for practice in speaking and writing.

109-110. Customs and Manners of Spain. Commercial Correspondence. Two credit hours. The year. Prerequisite, Spanish 104. Mr. Gutierrez.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

Students intending to major in Spanish are urged to elect the following courses outside of the department: History of Latin America (American History 125-126), History of Critical Theory (English 205), and History of Philosophy (Philosophy 107-108).

105-106. Advanced Spanish. Three credit hours. The year. Prerequisite, Spanish 103-104 or 110. Mr. Hendrix.

A study of Spanish syntax with illustrative exercises. Rapid reading of modern novels and plays.

119-120. The Modern Spanish Novel. Three credit hours. The year. This course will be given biennially to alternate with Spanish 121-122. Prerequisite, Spanish 105-106. Mr. Hendrix.

A careful study of the development of the modern Spanish novel, reading of representative authors. Lectures, collateral reading, and reports.

*121-122. The Modern Spanish Drama and Poetry. Three credit hours. The year. This course will be given biennially to alternate with Spanish 119-120. Prerequisite, Spanish 105-106. Mr. Hendrix.

A survey of the movements in Spanish drama and poetry during the 19th century. Lectures, collateral reading, and reports.

123-124. Drama of the Golden Age. Three credit hours. The year. Prerequisite, Spanish 105-106. This course to be given biennially to alternate with Spanish 125-126. Mr. Hendrix.

An intensive study of a limited number of plays of the representative dramatists. Lectures, collateral reading, and reports.

*Not given in 1921-1922.

*125-126. Prose of the Golden Age. Three credit hours. The year. This course will be given biennially to alternate with Spanish 123-124. Mr. Hendrix.

A study of the prose of the period, with especial emphasis on the novel. Lectures, collateral reading, and reports.

*131-132. Survey of Spanish Literature from the Earliest Times to the End of the 19th Century. Three credit hours. The year. Prerequisite, Spanish 105-106. Mr. Hendrix.

115-116. The Teaching of Spanish. Two credit hours. The year. Prerequisite, Spanish 105-106, or be registered for Spanish 105-106 and have the consent of the instructor. Mr. Hendrix.

The first semester will be devoted to a study of syntax, the second to the methodology and bibliography.

113-114. Advanced Composition and Conversation. Three credit hours. The year. Prerequisite, Spanish 110 or an equivalent. Mr. Gutierrez.

This course, conducted wholly in Spanish, is designed especially for prospective teachers and for persons desiring a practical command of the language. The subject matter will be in large part the geography and history of Spain and Spanish-America.

ROMANCE LANGUAGES

FOR GRADUATES

201-202. Introduction to Romance Philology.

203-204. Old Provençal.

*205-206. French Romanticism.

207-208. Research in French Literature.

209-210. Research in Spanish Literature.

211-212. Old Spanish.

217-218. Seminary in French Literature.

*219-220. Old French Literature.

*221-222. The Short Story.

227-228. Seminary in Spanish Literature.

For description of graduate courses in this department see the Bulletin of the Graduate School.

*Not given in 1921-1922.

SCHOOL ADMINISTRATION

Office, 100A Hayes Hall

PROFESSORS BROWN AND McCRACKEN

101. Public Education in the United States. Three credit hours. Either semester. Three lectures each week and assigned readings. Required of all students in the College of Education except teachers in service, who may take 105. Elective to others. Prerequisite, Junior standing. Mr. Brown, Mr. McCracken.

An introductory survey of public education in the United States, as the expression and promoter of democracy. School laws, regulations and decisions of Ohio.

Credit for both 101 and 105 will not be given.

105. Public Education in the United States. Two credit hours. Either semester. Two lectures each week and assigned readings. Open to teachers, supervisors, principals, and superintendents in active service, subject to the approval of the instructor in charge. Required of all such enrolled in the College of Education who do not take 101. Elective to all such if enrolled in other colleges. Prerequisite, Junior standing. Mr. Brown, Mr. McCracken.

Credit for both 101 and 105 will not be given.

(This course is an abridgment of School Administration 101 and will be offered Saturdays or evenings.)

FOR ADVANCED UNDERGRADUATES AND GRADUATES

103. The Administration of Rural Education. Three credit hours. First semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

Problems affecting the organization, administration, supervision, and inspection of rural schools.

104. School Hygiene. Two credit hours. Second semester. Two lectures each week, assigned readings, investigations, and reports. Elective. Prerequisite, School Administration 101 or 105, and for graduate credit one year of experience. Mr. McCracken.

A study of school hygiene, including such topics as communicable diseases, hygiene of vision, of hearing, and of teeth; nutrition, hygiene of instruction, health of the teacher, fatigue, and equipment of buildings and grounds.

111. The Administration of Secondary Schools. Three credit hours. First semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, Junior standing and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Historical forerunners of the high school, types of high schools, aims of secondary education, relation to higher and elementary education, high schools of the North Central States, curricula and time schedules, college entrance requirements, buildings, equipment, texts, supplies, support, and cost.

Credit for both 111 and 117 will not be given.

112. The Administration of Secondary Schools. Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, Junior standing and for graduate credit one year of experience in addition to 101 or 105. Mr. Brown.

Retardation, elimination, over-age, delinquency, student activities, grading, records, reports, hygiene, sanitation, health; preparation, selection, assignment, tenure, and pay of teachers.

Credit for both 112 and 118 will not be given.

113. The Administration of Elementary Schools. Three credit hours. First semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, Junior standing and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Aims, organization, and control, types of schools, curricula, schedules, texts, supplies, relation to secondary and vocational education, buildings, equipment, grounds, support, and cost.

Credit for both 113 and 119 will not be given.

114. The Administration of Elementary Schools. Three credit hours. Second semester. Three lectures each week, assigned readings, and reports. Elective. Prerequisite, Junior standing and for graduate credit one year of experience in addition to 101 or 105. Mr. McCracken.

Retardation and elimination, individual differences, grading and promotions, efficiency tests and records, delinquents and defectives, student activities. Teacher: training, selection, promotion, tenure, salaries, pension, organizations.

Credit for both 114 and 120 will not be given.

115. Educational Statistics. Two credit hours. First semester. Two lectures each week, assigned readings and problems. Elective. Open to superintendents, principals, and graduates of experience, by permission of the instructor in charge. Mr. Brown.

A study of the statistical method, and its application to administrative data.

116. City School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to Seniors and graduates. Prerequisite, six hours of school administration and for graduate credit one year of experience. Mr. Brown.

A comparative and critical study of several types of existing city school systems. A thesis on some problem required of each student.

***117. Problems of High School Administration.** Two credit hours. First semester. Two lectures each week, assigned readings, and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105 and for graduate credit one year of experience. Mr. Brown.

Credit for both 111 and 117 will not be given.

(This course is an abridgment of School Administration 111 and will be offered Saturdays or evenings.)

***118. Problems of High School Administration.** Two credit hours. Second semester. Two lectures each week, assigned readings, and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105 and for graduate credit one year of experience. Mr. Brown.

Credit for both 112 and 118 will not be given.

*Not given in 1921-1922.

(This course is an abridgment of School Administration 112 and will be offered Saturdays or evenings.)

119. Problems of Elementary School Administration. Two credit hours. First semester. Two lectures each week, assigned readings, and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105 and for graduate credit one year of experience. Mr. McCracken.

Credit for both 113 and 119 will not be given.

(This course is an abridgment of School Administration 113 and will be offered Saturdays or evenings.)

120. Problems of Elementary School Administration. Two credit hours. Second semester. Two lectures each week, assigned readings, and reports. Elective. Open to superintendents, principals, and teachers in service, by permission of the instructor in charge. Prerequisite, School Administration 101 or 105 and for graduate credit one year of experience. Mr. McCracken.

Credit for both 114 and 120 will not be given.

(This course is an abridgment of School Administration 114 and will be offered Saturdays or evenings.)

122. State School Administration. Three credit hours. Second semester. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to Seniors and graduates. Prerequisite, six hours of school administration and for graduate credit one year of experience. Mr. Brown.

A comparative study of the school systems of the various American states including such topics as federal and state policies, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, the state and non-state education.

133-134. The Administration of Higher Education. Three credit hours. The year. Three lectures each week, assigned readings, investigations, and reports. Elective. Open to Seniors and graduates, by permission of the instructor in charge. Prerequisite, eight hours of school administration and two years of experience. Mr. Brown.

A comparative study of the various types of control, organization, and administrative policies as illustrated in selected col-

leges, universities, technical schools, junior colleges, normal schools, and normal colleges.

135. Vocational Education. Two credit hours. First semester.

A course covering the facts and principles involved in vocational education, together with a study of vocational guidance in the public schools.

FOR GRADUATES

201. Seminary in School Administration.

202. Seminary in School Administration.

For description of graduate courses in this department see the Bulletin of the Graduate School.

SHOPWORK

Office, 125 Shops Building

PROFESSOR W. A. KNIGHT, MR. BEEM, MR. FOUST, MR. DENMAN,
MR. P. L. WRIGHT, MR. H. R. WRIGHT, MR. SENN,
AND DEPARTMENT ASSISTANTS

105. Foundry Work. Two credit hours. Either semester. Industrial Education, first year.

115. Forging. Two credit hours. Either semester. Industrial Education, third year. Mr. Foust, Mr. Wright.

118. Advanced Forging. Two credit hours. Second semester. Industrial Education, fourth year. Prerequisite, Shopwork 115. Mr. Foust, Mr. Wright.

119. Machine Work. Three credit hours. Either semester. Industrial Education, third year. Mr. Knight, Mr. H. R. Wright.

121. Advanced Machine Work. Three credit hours. Either semester. Optional, Industrial Education, fourth year. Prerequisite, Shopwork 119. Mr. Knight, Mr. H. R. Wright.

123. Advanced Machine Work. Two credit hours. First semester. Elective. Prerequisite, Shopwork 121. Mr. Knight, Mr. H. R. Wright.

125. Construction Work. Two credit hours. Either semester. Elective. Prerequisite, Shopwork 121. Mr. Knight, Mr. H. R. Wright.

SOCIOLOGY

(See Economics and Sociology)

SPANISH

(See Romance Languages and Literatures)

SURVEY OF EDUCATION

THE DEAN OF THE COLLEGE OF EDUCATION

Introductory Survey of Education. One credit hour. First semester. Required of all students in the College of Education in either the first or the second year. The Dean.

An introductory survey of education as a separate field to acquaint the student with past and present trends in education, with educational experiments and literature, and with the opportunities and difficulties in teaching as a profession.

ZOOLOGY AND ENTOMOLOGY

Office, 101 Botany and Zoology Building

PROFESSORS OSBURN, OSBORN, AND METCALF, ASSOCIATE PROFESSOR HINE, ASSISTANT PROFESSORS BARROWS AND KRECKER, MR. KOSTIR, MR. KENNEDY, MR. WICKLIFF, AND DEPARTMENT ASSISTANTS

A number of lines of advanced work are open to students in Zoology and Entomology who desire to specialize in preparation for teaching, investigation, practical zoology and entomology, etc. Students desiring to continue work beyond the first year are requested to confer with the Head of the Department as to the best sequence of courses.

For those students desiring to receive a recommendation for the teaching of Zoology in secondary schools the department suggests that in addition to the introductory course, Zoology 101-102, one or more of the following courses be taken: 107-108, Economic Entomology; 121-122, Advanced Zoology of Invertebrates; 123, Microtechnic; 131-132, Evolution; 159-160, Animal Ecology.

ZOOLOGY

101-102. Elementary Zoology. Three credit hours. The year. Lectures and laboratory. Mr. Osburn, Mr. Barrows, Mr. Kreckler, Mr. Kostir, Mr. Wickliff, and department assistants.

An introductory general course intended to give an acquaintance with animal life and the principles of biology, and to serve as a foundation for more advanced courses.

Zoology 101 is given also during the second semester.

115. General Principles of Heredity. Three credit hours. Either semester. Three lectures each week. Prerequisite, Zoology 101-102 or Botany 101-102 or equivalent. Mr. Barrows.

A study of heredity in animals and plants to serve as an introduction to heredity as a basis for advanced work in plant and animal breeding and as an aid in the analysis of biological and sociological problems into which the question of heredity enters. The subject will be presented in lectures, illustrated with lantern slides and actual specimens. Exercises in the form of problems will be assigned. The different types of heredity studied will be chosen from the animal and plant material which best illustrates the subject. Hereditary characters found in man will be used to a large extent. The course will be made as simple and practical as the subject will permit. Present-day theories and technical applications will be left for discussion in the more advanced courses to which they properly belong.

121-122. Advanced Zoology of Invertebrates. Three credit hours. The year. One lecture and two laboratory periods each week. Prerequisite, Zoology 101-102 or equivalent. Mr. Kostir.

A study of the structure, life histories, habits, and relationships of invertebrate animals, together with the consideration of important biological principles. Lectures, laboratory exercises, and occasional field trips.

123. Microtechnic. Two credit hours. First semester. Two laboratory periods each week. Prerequisite, Zoology 101-102 or equivalent. Mr. Kostir.

A course in the theory and practice of microscopic methods, including fixing, embedding, sectioning, and staining of animal tissues, making permanent preparations, and special manipulation of microscopic accessories. Laboratory work, assigned readings, and conferences.

This course is designed for students intending to major in Zoology and those intending to teach biological science in secondary schools.

131-132. Evolution. Three credit hours. The year. Prerequisite, one year of zoology or an equivalent. Mr. Osburn.

The facts and theories of the origin, development, and distribution of animal life. The general order of treatment is: historical aspects, evidences, factors, and modern theories. The relation of evolutionary doctrine to practical problems is emphasized.

139. Ornithology. Two credit hours. First semester. Prerequisite, one year of biology. Mr. Hine.

The anatomy of the birds and a study of museum specimens.

140. Ornithology. Two credit hours. Second semester. Field work. Prerequisite, one year of biology. Mr. Hine.

145. The Teaching of Zoology. Three credit hours. First semester. Prerequisite, Zoology 101-102. Mr. Barrows.

This course is offered with the object of familiarizing the student with the material and the method of handling laboratory courses in zoology. The work consists of lectures and assigned readings on the sources of zoological information and the methods of teaching zoology, along with actual teaching in the laboratory and the collection and preservation of laboratory material.

FOR ADVANCED UNDERGRADUATES AND GRADUATES

159. Animal Ecology. Three credit hours. First semester. One lecture and four hours in the field or laboratory each week. Prerequisites, Zoology 101-102 and one additional year of biological science. Mr. Kreeker.

An introduction to the study of animals in their natural surroundings, which will include ponds, streams, fields, and woodlands, animal associations and the various factors which affect animals in relation to their environment.

Students who desire to continue the subject in the second half year can take up some particular phase of the work and should register for Zoology 142 in the second semester.

This course is recommended to students who expect to teach biology.

FOR GRADUATES

201-202. Seminary in Zoology.

223-224. Invertebrate Embryology.

241-242. Research Work.

247-248. Invertebrate Zoology.

For description of graduate courses in this department see the Bulletin of the Graduate School.

ENTOMOLOGY

107-108. Economic Entomology. Three credit hours. The year. Prerequisite, Zoology 101-102 or equivalent. An elementary course. Mr. Metcalf, Mr. Kennedy, and assistants.

The structure, physiology, development, and habits of insects, as a basis for insect control and for special study in entomology; followed by a general systematic survey of insects, mites, and ticks with special attention to destructive and beneficial species and the control of those injurious to farm, orchard, garden, forest, household, mill, and storehouse, and the health of man and domestic animals.

Lectures, quizzes, problems, and laboratory work on general anatomy, life-stages, field observations of habits and damage and the preparation and application of remedial measures. Students are required to prepare a collection. Those desiring to collect specimens in advance should get printed instructions from the department.

FOR GRADUATES

201-202. Seminary in Entomology.

241-242. Research Work.

For description of graduate courses in this department see the Bulletin of the Graduate School.

TIME SCHEDULE

COLLEGES OF ARTS AND EDUCATION

The following courses and sections are intended primarily for students in the Colleges of Arts and Education. Assignment to sections will be made strictly according to the order of receipt of the election cards and students will be admitted to the sections they elect provided those sections are not already filled.

Students from the Colleges of Arts and Education must not elect courses not listed under the Department of Instruction without first consulting the Secretary of their College.

Explanations

The two columns of figures under Course No. give the number of the course for the two semesters. The third column of figures indicates the number of credit hours each semester of the course.

KEY TO ABBREVIATIONS

- Bi.—Biological Building
- B. Z.—Botany and Zoology Building
- Br.—Brown Hall
- Ch.—Chemistry Building
- Ha.—Hayes Hall
- H. E.—Home Economics Building
- H. F.—Horticulture and Forestry Building
- L.—Library
- Lo.—Lord Hall
- M. L.—Machinery Laboratory
- Obs.—Observatory
- O.—Orton Hall
- P.—Page Hall
- Pav.—Judging Pavilion
- Ph.—Physics Building
- R. L.—Robinson Laboratory
- S.—Shops Building
- T.—Townshend Hall
- U.—University Hall
- V. C.—Veterinary Clinic
- V. L.—Veterinary Laboratory

L.—Lecture; Q.—Quiz; Lab.—Laboratory; R.—Recitations.

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